Subject: DarkTheme support
Posted by Tom1 on Fri, 08 Feb 2019 15:17:22 GMT
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Hi Mirek,

Nice to hear about the upcoming release! You have done great work.

I spotted the work on dark themes from the list and decided to try immediately, as I have long wanted to switch there for less eye strain.

In Windows, there are still some details to check. Please temporarily switch on a dark theme on your Windows 10 desktop to see what I'm referring to below. (Just open Settings in Windows and select High contrast, Turn on high contrast and then select some reasonable dark theme colors for Text, Hyperlinks, Disabled Text, Selected Text, Button Text and Background. Press Apply.) Then, run TheIDE to see where the tight spots are.

My eye immediately catches the following details when a Dark theme is enabled on Windows:

- Checkboxes on menu items stay in light theme coloring
- Close boxes on file tabs stay in light theme coloring
- package list text color stays black
- file list text color stays black (The same is true on FileSel)
- maybe code editor 'Dark theme' (as the button says in Settings dialog) could follow the window background color to use correct theme automatically.
- Settings dialog - Syntax highlighting - array column titles are not readable (light on light)
- Settings dialog (and other locations) - radio buttons have rough edges while the colors are swapped nicely though

Anyway, very nice work and quite a lot of it really!

Thanks and best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Mon, 11 Feb 2019 10:52:30 GMT
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Tom1 wrote on Fri, 08 February 2019 16:17Hi Mirek,

Nice to hear about the upcoming release! You have done great work.

I spotted the work on dark themes from the list and decided to try immediately, as I have long wanted to switch there for less eye strain.

In Windows, there are still some details to check. Please temporarily switch on a dark theme on

your Windows 10 desktop to see what I'm referring to below. (Just open Settings in Windows and select High contrast, Turn on high contrast and then select some reasonable dark theme colors for Text, Hyperlinks, Disabled Text, Selected Text, Button Text and Background. Press Apply.) Then, run TheIDE to see where the tight spots are.

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- maybe code editor 'Dark theme' (as the button says in Settings dialog) could follow the window background color to use correct theme automatically.
- Settings dialog - Syntax highlighting - array column titles are not readable (light on light)
- Settings dialog (and other locations) - radio buttons have rough edges while the colors are swapped nicely though

Anyway, very nice work and quite a lot of it really!

Thanks and best regards,

Tom

Would it be possible to post some screenshots and also screenshot of your settings?

Other than that, I can see 2 issues here:

- currently we are not adjusting colors if .iml images. I can do that, maybe if icon is not "no resolution" (probably could be renamed to 'raw' or 'fixed' or something), it would have its colors adjusted by DarkTheme function. Would that be a good idea?

- we are probably not getting correct colors from host platform. Maybe it would be fine to reduce the number of colors we are trying to read to minimum (paper, ink, dialog paper, menu item highlight) and derive rest from those...

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Mon, 11 Feb 2019 15:19:43 GMT
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Hi Mirek,

First, as for the .iml images, adjusting their color through DarkTheme sounds good. (The current visibility on dark background is a bit challenging.)

As for the screenshots: For starters, I decided to tune the colors a little to make them a bit more what I would like to have (along the lines of "Mint-Y-Dark" theme on Linux Mint 19.1) as the 'Dark

Theme on High Contrast' -selection was not exactly what I wanted. So, I started to look around for the UI color setting dialog on Windows 10. Well, there's no such dialog anymore. And as far as my googling went, there is no replacement either. In the end I'm under impression that there is no single decent place to set the colors. There are at least two registry areas that have an effect on Desktop application colors, but this is not complete:

Computer\HKEY_CURRENT_USER\Control Panel\Colors

Computer\HKEY_CURRENT_USER\Control Panel\Desktop\Colors

Changing the colors therein does have an effect on colors on part of the items (after logging out and back in), but not all as far as I can see.

Additionally, most applications I have installed on my computer do not handle dark color themes (or changing the system colors above) too well. They either ignore it or have mixed results. No wonder though as Windows 10 itself does not seem to have a clear approach to this either. (Actually, e.g. Microsoft Edge does have its private Theme selection (Dark/Light) in its settings and does not follow system colors.)

So, IMO, your idea of picking up those few system colors from Windows that are actually available (on Windows 10 too) and then deriving the rest out of them sounds good. Just need to figure out which colors are actually adjustable in Windows 10 (through standard Settings) and then decide how to proceed.

I will try to create a dark theme for Windows 10 and then post it here for reference.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Mon, 11 Feb 2019 20:03:28 GMT
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Hi,

I looked at the issue here at home on Windows 7, which still has old school color settings available: I found out that in TheIDE "Settings>IDE>GUI theme>Host platform" is responsible of making many of the coloring choices that override the system color settings I tried to do today in the office on Windows 10. If I switch over to GUI theme = Standard or Classic (here on Windows 7), most of the colors start to follow what is defined in Windows colors. At least with Windows 7, the dark theme looks quite nice with Classic, although, the controls are quite rough and well from the past... Maybe a new GUI theme with "Host platform" widgets but pure system colors will solve the issue. It seems that TheIDE knows the colors already but "Host platform" theme just overrides them.

I will next try to take a look at this back on Windows 10.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Tue, 12 Feb 2019 08:30:08 GMT
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Hi Mirek,

On Windows 10 the 'Classic' theme on TheIDE was better than 'Host platform' but not perfect. The package list and file list still use black font on my dark gray background. Menu's become readable.

I have now looked a bit deeper at the Microsoft documentation to find out about the "Dark Theme". It seems the new way, that has replaced system colors, is called 'Visual Styles'. And as far as my googling went, there is no easy way to get the Windows 10 desktop completely into a dark theme. While the new Windows Store apps (or UWP apps) support the Windows 10 Dark theme (default app mode) setting, the desktop applications are generally not aware of that at all. And Windows does not help by making similar changes to old school system colors, so they are not in sync. And most Windows desktop apps only read those old system colors, so they cannot follow the current theme. It seems to me that the Desktop applications are pretty much on their own.

If there's a way to read (in a Desktop application) the 'Settins>Personalization>Colors>Choose your default app mode: Light/Dark' -flag and the selected 'Accent color', then resolving the rest of the colors to fit the landscape should be possible to some extent. Maybe this would solve the Windows 10 specific dark theme problem. But is it worth the trouble? Most applications are not usable with dark themed system colors on Windows 10 anyway.

Best regards,

Tom

EDIT: There is a way to detect Windows 10 dark/light theme setting: In registry "Computer\HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Themes\Personalize\AppsUseLightTheme " contains 1 for light or 0 for dark. (Found it in https://stackoverflow.com/questions/51334674/how-to-detect-windows-10-light-dark-mode-in-win32-application)

EDIT2: And more in registry: "Computer\HKEY_CURRENT_USER\Software\Microsoft\Windows\DWM" contains Windows 10 colorization color and accent color entries along with other related info.

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Tue, 12 Feb 2019 11:44:32 GMT
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Hi,

I composed some code to pick up the Windows 10 light/dark theme and accent/colorization colors:

```
bool IsSystemThemeDark(){
#ifdef WIN32
    HKEY SWKey;
    HKEY MSKey;
    HKEY WINKey;
    HKEY CVKey;
    HKEY ThemesKey;
    HKEY PersonalizeKey;

    LONG Status;
 bool darkTheme=false;

    Status =
RegOpenKeyEx(HKEY_CURRENT_USER,TEXT("Software"),0,KEY_READ,&SWKey);
    if(Status == ERROR_SUCCESS){
  Status = RegOpenKeyEx(SWKey,TEXT("Microsoft"),0,KEY_READ,&MSKey);
     if(Status == ERROR_SUCCESS){
   Status = RegOpenKeyEx(MSKey,TEXT("Windows"),0,KEY_READ,&WINKey);
   if(Status == ERROR_SUCCESS){
    Status = RegOpenKeyEx(WINKey,TEXT("CurrentVersion"),0,KEY_READ,&CVKey);
    if(Status == ERROR_SUCCESS){
     Status = RegOpenKeyEx(CVKey,TEXT("Themes"),0,KEY_READ,&ThemesKey);
     if(Status == ERROR_SUCCESS){
      Status = RegOpenKeyEx(ThemesKey,TEXT("Personalize"),0,KEY_READ,&PersonalizeKey);
      if(Status == ERROR_SUCCESS){
          DWORD RegType;
          DWORD BufferSize=16;
          char pStr[16];


Status=RegQueryValueEx(PersonalizeKey,TEXT("AppsUseLightTheme"),NULL,&RegType,(LPB
YTE)pStr,&BufferSize);
             if(Status == ERROR_SUCCESS) if((*(DWORD*)pStr)==0) darkTheme=true;
             RegCloseKey(PersonalizeKey);
      }
      RegCloseKey(ThemesKey);
     }
     RegCloseKey(CVKey);
    }
    RegCloseKey(WINKey);
   }
```

```
   RegCloseKey(MSKey);
    }
    RegCloseKey(SWKey);
   }
   if(Status == ERROR_SUCCESS) return darkTheme;
#endif

 // Generic solution for GTK and older Windows
   Color paper=SColorPaper();

   if(paper.GetR()<128 && paper.GetG()<128 && paper.GetB()<128) return true; // Dark
background
   return false;
}

RGBA GetSystemColorizationColor(){
 RGBA color=Gray(); // Default

#ifdef WIN32
   HKEY SWKey;
   HKEY MSKey;
   HKEY WINKey;
   HKEY DWMKey;

   LONG Status;

 // "Computer\HKEY_CURRENT_USER\Software\Microsoft\Windows\DWM"

   Status =
RegOpenKeyEx(HKEY_CURRENT_USER,TEXT("Software"),0,KEY_READ,&SWKey);
   if(Status == ERROR_SUCCESS){
  Status = RegOpenKeyEx(SWKey,TEXT("Microsoft"),0,KEY_READ,&MSKey);
    if(Status == ERROR_SUCCESS){
   Status = RegOpenKeyEx(MSKey,TEXT("Windows"),0,KEY_READ,&WINKey);
   if(Status == ERROR_SUCCESS){
    Status = RegOpenKeyEx(WINKey,TEXT("DWM"),0,KEY_READ,&DWMKey);
    if(Status == ERROR_SUCCESS){
       DWORD RegType;
       DWORD BufferSize=16;
       char pStr[16];


Status=RegQueryValueEx(DWMKey,TEXT("ColorizationColor"),NULL,&RegType,(LPBYTE)pStr,
&BufferSize);

          if(Status == ERROR_SUCCESS) color=(*(RGBA*)pStr);

    RegCloseKey(DWMKey);
```

```
    }
    RegCloseKey(WINKey);
   }
   RegCloseKey(MSKey);
     }
     RegCloseKey(SWKey);
    }
    if(Status == ERROR_SUCCESS) return color; // Success

#endif
 // TODO solve other sources

 return color; // Default
}

RGBA GetSystemAccentColor(){
 RGBA color=Gray(); // Default

#ifdef WIN32
    HKEY SWKey;
    HKEY MSKey;
    HKEY WINKey;
    HKEY DWMKey;

    LONG Status;

 // "Computer\HKEY_CURRENT_USER\Software\Microsoft\Windows\DWM"

    Status =
RegOpenKeyEx(HKEY_CURRENT_USER,TEXT("Software"),0,KEY_READ,&SWKey);
    if(Status == ERROR_SUCCESS){
  Status = RegOpenKeyEx(SWKey,TEXT("Microsoft"),0,KEY_READ,&MSKey);
     if(Status == ERROR_SUCCESS){
   Status = RegOpenKeyEx(MSKey,TEXT("Windows"),0,KEY_READ,&WINKey);
   if(Status == ERROR_SUCCESS){
    Status = RegOpenKeyEx(WINKey,TEXT("DWM"),0,KEY_READ,&DWMKey);
    if(Status == ERROR_SUCCESS){
        DWORD RegType;
        DWORD BufferSize=16;
        char pStr[16];


Status=RegQueryValueEx(DWMKey,TEXT("AccentColor"),NULL,&RegType,(LPBYTE)pStr,&Buff
erSize);

           if(Status == ERROR_SUCCESS) color=(*(RGBA*)pStr);

     RegCloseKey(DWMKey);
```

```
    }
    RegCloseKey(WINKey);
   }
   RegCloseKey(MSKey);
    }
    RegCloseKey(SWKey);
   }
   if(Status == ERROR_SUCCESS) return color; // Success

#endif
 // TODO solve other sources

 return color; // Default
}
```

At least this works on relatively current Windows 10, but I do not know how to make U++ tune its colors along these colors, so I'll just drop this here.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Tue, 12 Feb 2019 12:01:54 GMT
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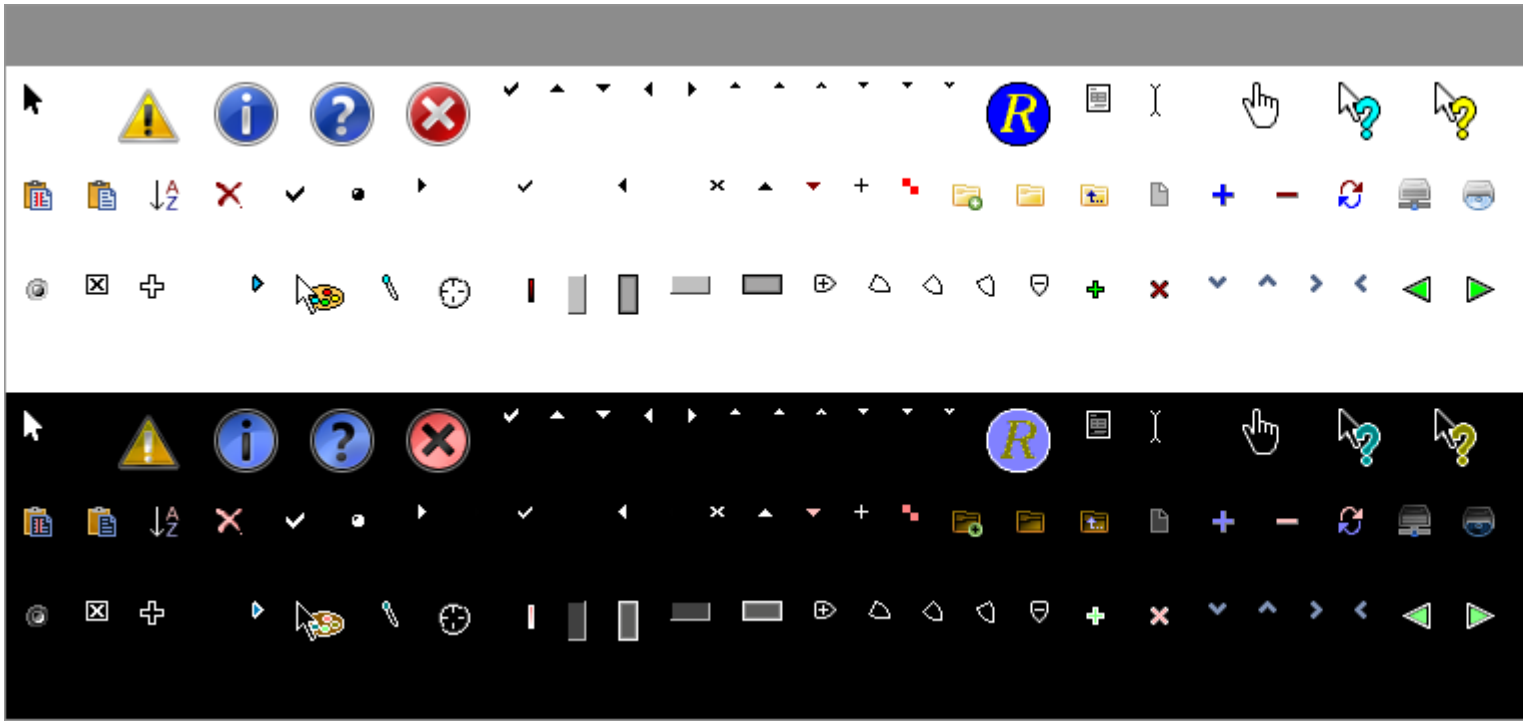
Meanwhile, I was playing with 'darkening the icons'. It is promising, but still not quite there:

All seems ok, except "reporticon". I guess there is a trouble with yellow...

Mirek

File Attachments

1) Clipboard01.png, downloaded 1655 times



Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Tue, 12 Feb 2019 12:50:13 GMT
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Hi Mirek,

Good! This looks promising.

It is easy to see that most turn out great, but some would be better off just as they were. E.g. earth looks better in green+blue just as in light theme. In my opinion, the same goes for many of the folder images. I think that in some cases the color is part of what makes us understand what the icon stands for. Is the plan to create a dark themed icon set on the side or just automatically convert any icon on the fly? A dark themed icon set on the side (originally created from the light themed icons) would allow fine tuning the result for each.

Only running TheIDE with the new icon set on dark theme will tell if they need any tuning.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Tue, 12 Feb 2019 13:02:29 GMT
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Tom1 wrote on Tue, 12 February 2019 13:50Hi Mirek,

Good! This looks promising.

It is easy to see that most turn out great, but some would be better off just as they were. E.g. earth looks better in green+blue just as in light theme. In my opinion, the same goes for many of the folder images. I think that in some cases the color is part of what makes us understand what the icon stands for. Is the plan to create a dark themed icon set on the side or just automatically convert any icon on the fly? A dark themed icon set on the side (originally created from the light themed icons) would allow fine tuning the result for each.

Only running TheIDE with the new icon set on dark theme will tell if they need any tuning.

Best regards,

Tom

Plan is to try to get this right to be done automagically. There is always a option to override icons, but I guess U++ niche right now is small teams / individual projects with not much resources to provide multiple icon sets (normal, UHD, dark normal, dark UHD).

I believe UHD scaling is not perfect, but acceptable. I hope for the same w.r.t. dark theme.

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Tue, 12 Feb 2019 13:15:55 GMT
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Another try (posting here mostly for myself to keep the track...)

```
Color DarkTheme2(Color c)
{
 int h = 255 - Grayscale(c);

 int v[3], t[3];
 v[0] = c.GetR();
 v[1] = c.GetG();
 v[2] = c.GetB();

 t[0] = h;
 t[1] = h;
 t[2] = h;
```

```
 int i0 = 0;
 int i1 = 1;
 int i2 = 2;

 if(v[i0] > v[i1])
  Swap(i0, i1);
 if(v[i1] > v[i2])
  Swap(i1, i2);
 if(v[i0] > v[i1])
  Swap(i0, i1);

 t[i0] = clamp(h - (v[1] - v[0]), 0, 255);
 int h2 = h + (v[2] - v[1]);
 t[i2] = clamp(h2, 0, 255);
 h2 -= t[i2];
 t[i0] -= h2;
 t[i1] -= h2;

 return Color(t[i0], t[i1], t[i2]);
}
```

File Attachments

1) Clipboard01.png, downloaded 1755 times



Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Tue, 12 Feb 2019 14:02:29 GMT
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OK, good point. I can live with that...

While on the subject, I hope we can get global functions like:

int GUI_GetDarkLightMode();
void GUI_SetDarkLightMode(int mode);

, where mode can be THEME_MODE_LIGHT, THEME_MODE_DARK or THEME_MODE_AUTO.

THEME_MODE_AUTO would automatically follow what 'IsSystemThemeDark()' can tell. There is a WM_DWMCOLORIZATIONCOLORCHANGED, that can tell about system colorization changes in Windows. However, WM_SETTINGCHANGE can detect that and also a change in Dark/Light mode. (Just checked.)

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Tue, 12 Feb 2019 14:26:20 GMT
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Your 'another try' with DarkTheme2 is even better. I applied it to my chart view showing maps in dark theme mode instead of my own function which I built for the same purpose a couple of years ago. Your DarkTheme2 is better, so I'm switching over! Thanks!

(We need to have a dark night display mode for our clients working in the dark in vehicles.)

BR, Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Wed, 13 Feb 2019 08:38:11 GMT
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Tom1 wrote on Tue, 12 February 2019 15:02OK, good point. I can live with that...

WM_DWMCOLORIZATIONCOLORCHANGED
WM_SETTINGCHANGE

Not going there for now. Long time ago I decided that we will freeze the settings upon program launch.

I know it is not perfect, but changing while running is a source of hard to resolve situations and bugs (mostly because some widget stores some color internally).

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Wed, 13 Feb 2019 09:30:37 GMT
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I see. Is it 'no' for WM_... triggered automatic changes only or also 'no' for the user requested

dark/light mode changes?

BR, Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Tue, 19 Feb 2019 11:10:34 GMT
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Well, I have to say that supporting dark theme in win32 is uphill battle... There are 3 issues:

- system colors. These are wrong, but this is fixable - I can say that if registry says we are dark and paper is light, I can adjust colors with DarkTheme function. So this is barely solvable.

- Theme GUI elements. Obviously, win32 does not change these to dark colors. We can try to invert colors in the same way as with icons. Not sure how good it will look though (not tested yet)

- Windows non-client areas, like caption. These remain "light" in dark mode. This would be quite hard to solve, in fact this would require overriding really a lot of things.... While above issues are barely survivable, this one makes me stop...

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Tue, 19 Feb 2019 12:30:19 GMT
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Hi Mirek,

I only just a couple of days ago updated my Windows 10 to version 1809, which introduced Dark Theme support in Windows File Explorer, which is not a store app, but a desktop application. (This was not available in 1803.) This IMO proves that Microsoft is just in the middle of transition of Windows 10 desktop theming. (E.g. Wordpad and Notepad do not have a clue about the Light/Dark mode.) I would expect Microsoft to release some documentation about how this Dark/Light theme support is supposed to be done on Windows 10 with desktop applications. (Unless they have and I just could not find it, of course.)

I think the non-client areas are controlled by DWM which can use the user selected accent color to draw the caption. Just select "Personalize > Colors > Show accent color on the following surfaces > [V] Title bars and window borders". And this is up to Windows and the user to select and handle anyway. U++ is only responsible for painting the client area.

-

In my opinion, just basic handling of Dark/Light theme in a way that makes the application to fit in is enough. In case of Windows 10, it is all about using the knowledge of Windows Dark/Light mode, the Colorization color and the Accent color. (For those functions I posted the code earlier here.) Everything else could be solved from there. Nothing fancy, just the basics.

-

In the end of the day, this is not a high priority issue for me. I can largely live on light theme too. I just have the feeling that the dark theme is slowly emerging and it will need sufficient support, but maybe not this month yet.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Thu, 21 Feb 2019 08:52:02 GMT
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Next iteration of DarkTheme function. I guess this is the final one...

```
Color DarkTheme2(Color color)
{
 if(IsNull(color))
  return Null;

 double v[3];
 v[0] = color.GetR();
 v[1] = color.GetG();
 v[2] = color.GetB();

 static double c[3] = { 0.21, 0.72, 0.07 };

 double m0 = 0.21 * v[0] + 0.72 * v[1] + 0.07 * v[2];
 double m = 256 - m0;

 int i0 = 0;
 int i1 = 1;
 int i2 = 2;

 if(v[i0] > v[i1])
  Swap(i0, i1);
 if(v[i1] > v[i2])
  Swap(i1, i2);
```

```
 if(v[i0] > v[i1])
  Swap(i0, i1);

 if(m0 < m) {
  m -= m0;
  double a = min(v[i2] + m, 255.0) - v[i2];
  v[i0] += a;
  v[i1] += a;
  v[i2] += a;
  m -= a;

  a = min(v[i1] + m / (c[i0] + c[i1]), 255.0) - v[i1];
  v[i0] += a;
  v[i1] += a;
  m -= (c[i0] + c[i1]) * a;

  v[i0] = min(v[i0] + m / c[i1], 255.0);
 }
 else {
  m = m0 - m;
  double a = v[i0] - max(v[i0] - m, 0.0);
  v[i0] -= a;
  v[i1] -= a;
  v[i2] -= a;
  m -= a;

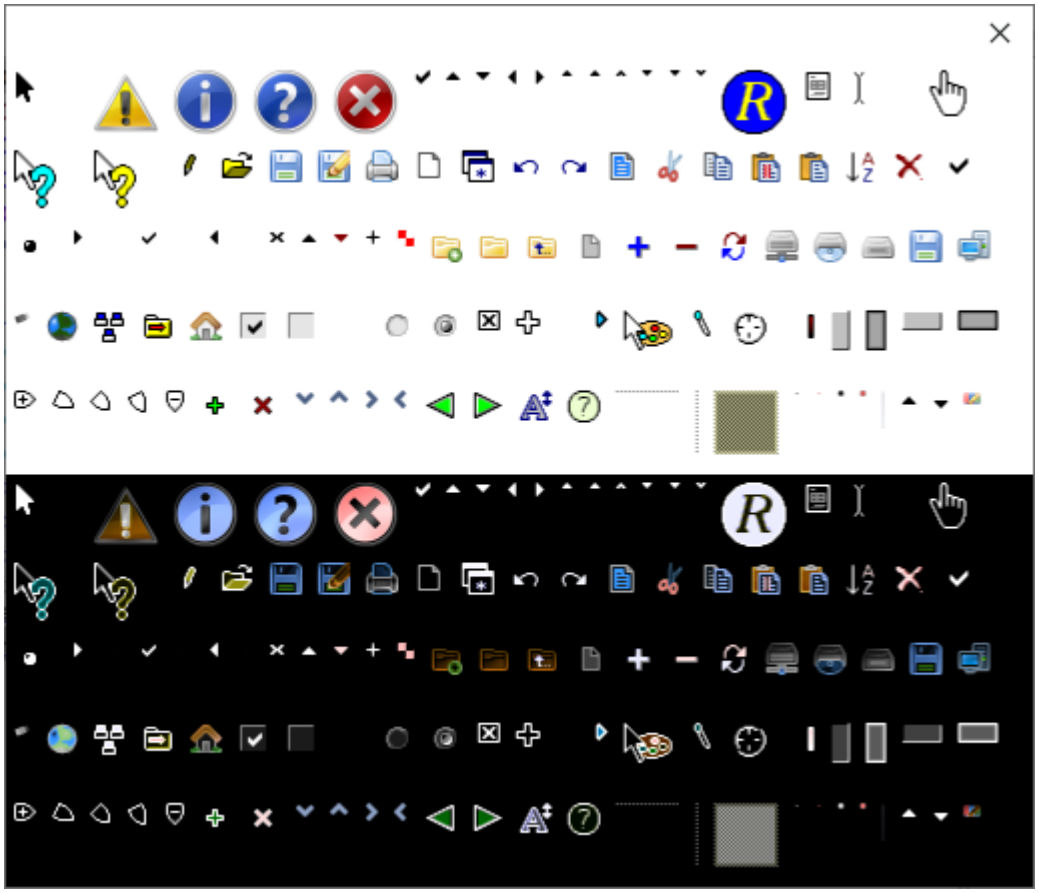
  a = v[i1] - max(v[i1] - m / (c[i1] + c[i2]), 0.0);
  v[i1] -= a;
  v[i2] -= a;
  m -= (c[i1] + c[i2]) * a;

  v[i2] = max(v[i2] - m / c[i2], 0.0);
 }

 return Color((int)v[0], (int)v[1], (int)v[2]);
}
```

File Attachments

1) Clipboard01.png, downloaded 1664 times



Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Thu, 21 Feb 2019 08:53:58 GMT
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Tom1 wrote on Tue, 19 February 2019 13:30Hi Mirek,

I only just a couple of days ago updated my Windows 10 to version 1809, which introduced Dark Theme support in Windows File Explorer, which is not a store app, but a desktop application. (This was not available in 1803.) This IMO proves that Microsoft is just in the middle of transition of Windows 10 desktop theming. (E.g. Wordpad and Notepad do not have a clue about the Light/Dark mode.) I would expect Microsoft to release some documentation about how this Dark/Light theme support is supposed to be done on Windows 10 with desktop applications. (Unless they have and I just could not find it, of course.)

I think the non-client areas are controlled by DWM which can use the user selected accent color to draw the caption. Just select "Personalize > Colors > Show accent color on the following surfaces > [V] Title bars and window borders". And this is up to Windows and the user to select and handle anyway. U++ is only responsible for painting the client area.

-

In my opinion, just basic handling of Dark/Light theme in a way that makes the application to fit in is enough. In case of Windows 10, it is all about using the knowledge of Windows Dark/Light mode, the Colorization color and the Accent color. (For those functions I posted the code earlier here.) Everything else could be solved from there. Nothing fancy, just the basics.

-

In the end of the day, this is not a high priority issue for me. I can largely live on light theme too. I just have the feeling that the dark theme is slowly emerging and it will need sufficient support, but maybe not this month yet.

Best regards,

Tom

Well, I have meanwhile found that you can actually activate correct windows captions in settings, so the game is back on...

The key now is the fact that we can detect that system colors do not correspont to dark mode settings and adjust everything accordingly.

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Fri, 22 Feb 2019 07:40:23 GMT
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mirek wrote on Thu, 21 February 2019 10:53
...

Well, I have meanwhile found that you can actually activate correct windows captions in settings, so the game is back on...

The key now is the fact that we can detect that system colors do not correspont to dark mode settings and adjust everything accordingly.

Hi,

Can you point out where the correct windows captions are set?

BR, Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Fri, 22 Feb 2019 18:04:55 GMT
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Tom1 wrote on Fri, 22 February 2019 08:40mirek wrote on Thu, 21 February 2019 10:53

...

Well, I have meanwhile found that you can actually activate correct windows captions in settings, so the game is back on...

The key now is the fact that we can detect that system colors do not correspont to dark mode settings and adjust everything accordingly.

Hi,

Can you point out where the correct windows captions are set?

BR, Tom

Uhm same place you suggest... "Personalize > Colors > Show accent color on the following surfaces > [V] Title bars and window borders"

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Thu, 07 Mar 2019 13:51:31 GMT
View Forum Message <> Reply to Message

Hi Mirek,

Can you give an update on your current plan for the Dark Theme support?

I bet you have more important things to deal with, but still it would be nice to know.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Tue, 12 Mar 2019 23:16:06 GMT
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Tom1 wrote on Thu, 07 March 2019 14:51Hi Mirek,

Can you give an update on your current plan for the Dark Theme support?

I bet you have more important things to deal with, but still it would be nice to know.

Best regards,

Tom

I do not think it will happen before 2019.1 release...

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Wed, 13 Mar 2019 11:15:19 GMT
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Hi,

OK, no worries. I'm not in hurry.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by Klugier on Sun, 17 Mar 2019 01:05:58 GMT
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Hello Tom and Mirek,

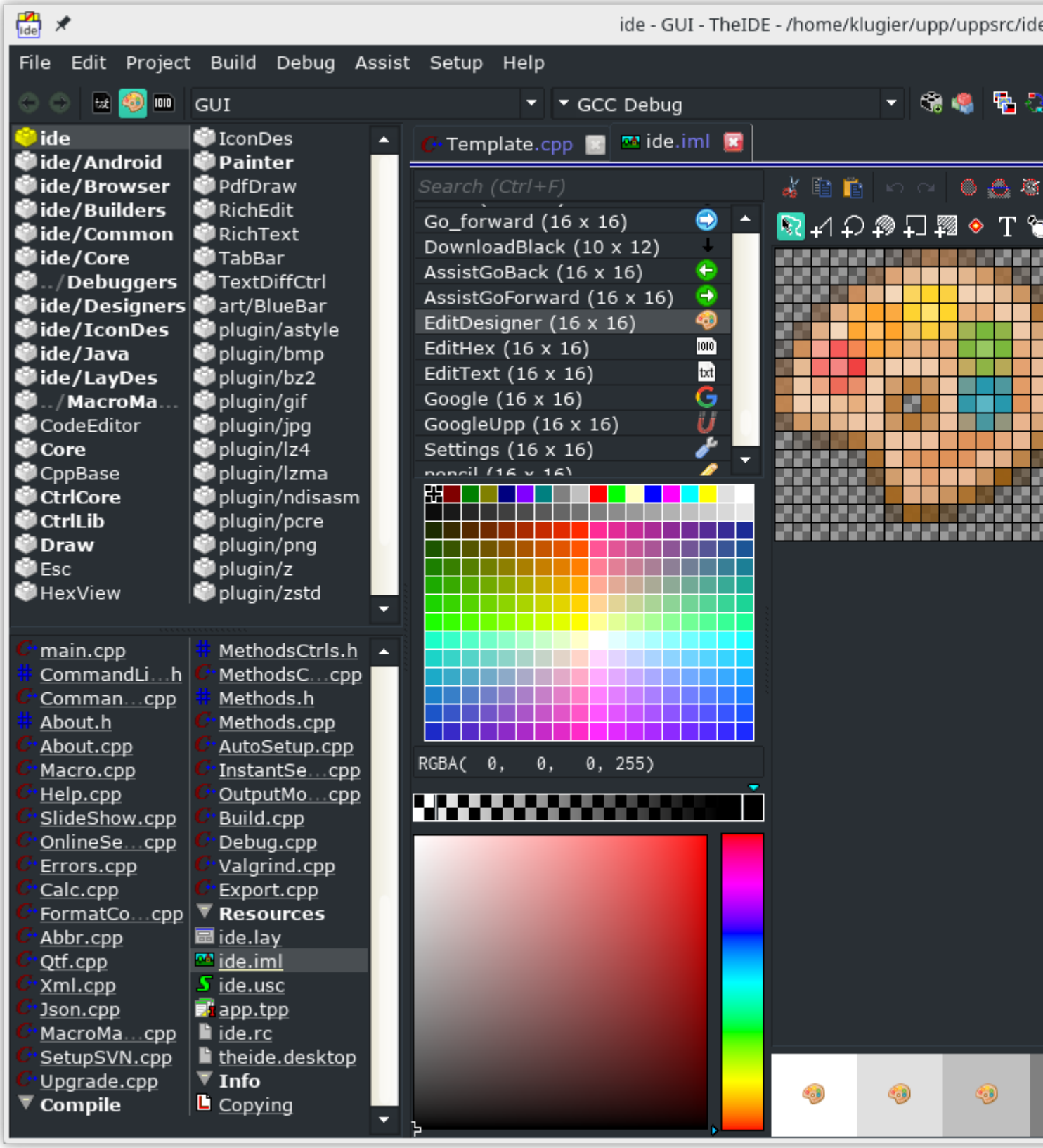
I tested dark them on my Linux machine with dark GTK theme and came into conclusion. The icons for TheIDE doesn't look grate, but the main reason for that is that we convert icons that do not really needs to be converted. It looks grate on both dark and white theme. I believe we should gain good results when we allow the programmer to decide how icons should behave in white/dark environment. In my opinion IconDes should offer following options:
- auto (use conversion algorithm for icon)
- separate icon for white/light themes
- separate icon for dark themes
- none (do not make conversion and use the same icon in both environments dark and light)

Let's look at the this picture. Some of Ide icons look great in IconDes, but the same icons with color inversion doesn't look great in toolbar:

Sincerely,
Klugier

File Attachments

1) TheIDEWithDarkTheme.png, downloaded 1365 times



Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Sun, 17 Mar 2019 09:15:12 GMT
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There is no color conversion of .iml icons in the trunk yet.

Are you testing with that code added to trunk, or did you just expected to be there already?

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by Klugier on Sun, 17 Mar 2019 10:54:34 GMT
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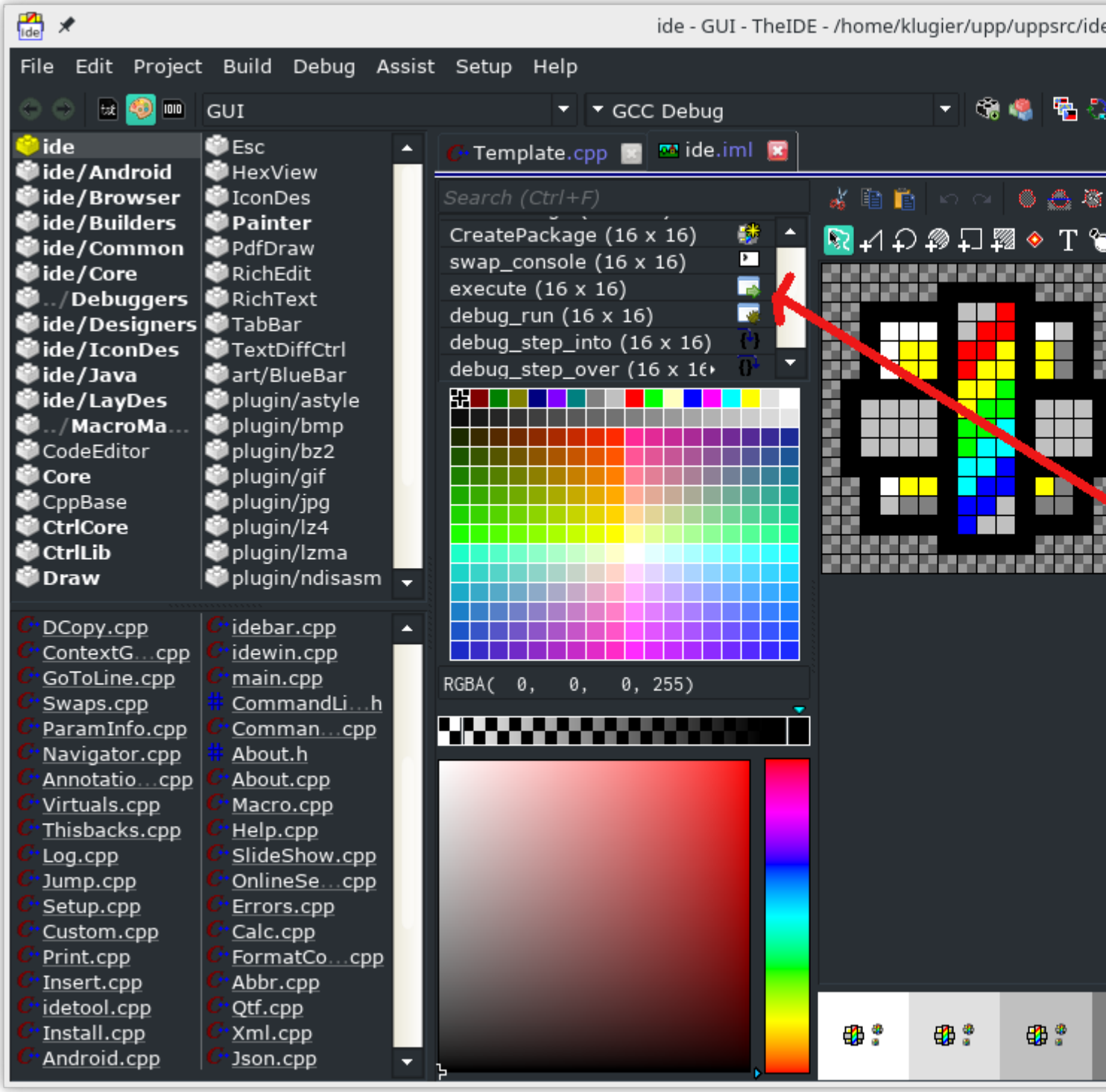
Hello,

It is converted somehow even it is not do intentionally. Look at debug/run icons inside TheIDE. Inside IconDes it's fulfillment are white, but inside TheIDE is is inverted to the dark colors. Here is example:

Sincerely,
Klugier

File Attachments

1) DarkThemeIconsDifferences.png, downloaded 1347 times



Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Sat, 23 Mar 2019 22:31:09 GMT
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Well, it appears there was already some code to convert icons in toolbar/menubar for the dark theme (and sadly, I have completely forgot about it...).

Being there, I have removed it and replaced by .iml conversion, experimentally. So now the new algorithm is used there, please test...

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Sun, 24 Mar 2019 08:53:52 GMT
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There are constants that can used to finetune the conversion, in Core/Color.cpp:233

```
// this represent physiological perception of brightness of R,G,B. Sum = 1
// static double c[3] = { 0.21, 0.72, 0.07 }; // physiologically correct values
 static double c[3] = { 0.3, 0.5, 0.2 }; // with this set, blues and reds are more pronounced
```

As you can see, I have tried to alter the set and IMO it now looks even better (previously, blues tended to end as too close to white).

I am posting this here so that it can be eventually experimented on...

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Sun, 24 Mar 2019 22:10:24 GMT
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Tom1 wrote on Thu, 07 March 2019 14:51Hi Mirek,

Can you give an update on your current plan for the Dark Theme support?

I bet you have more important things to deal with, but still it would be nice to know.

Best regards,

Tom

Well, change of plans, first version is commited. I would appreciate testing, there are likely to be many places where color is broken...

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Mon, 25 Mar 2019 10:45:15 GMT
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Hi Mirek,

Good news! I'm testing dark theme now...

Surprisingly, a linking issue arised with dual tif libraries when compiling my app. (I have one in gdal and another in plugin/tif. Both needed. Actually I would only need one, but can't figure out how to make gdal use Upp plugin/tif instead of the bundled tiff library.) The picture shows this issue as well as a little bit strange color combination for the message, which is more relevant for the Dark -theme at hand:

After working awhile with TheIDE and recompliling, the colors of the linking error lines turned to white on pure red. Then when I closed TheIDE and started over with Light theme, I discovered that the linking error was printed with black on relatively dark red. That's hard to read, at least for me.

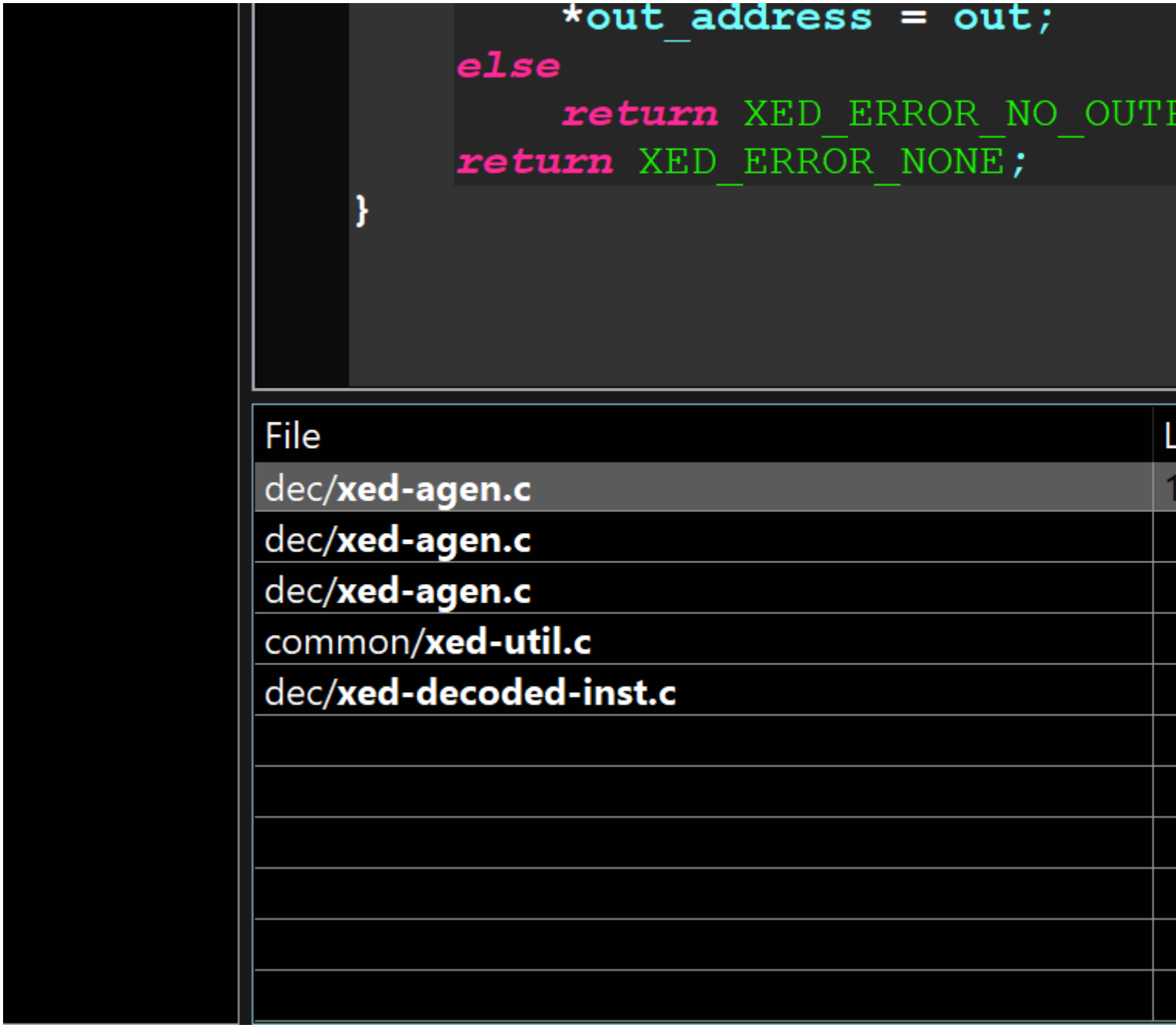
I need to figure out this linking issue before I can seriously test with my own code. Anyway, I can see that the frame in TheIDE already looks much better on Windows 10 than it did before.

Best regards,

Tom

File Attachments

1) Dark.png, downloaded 1358 times



Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Mon, 25 Mar 2019 10:51:10 GMT
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OK, now I know: The linking error background color is sluggishly following the Setup>Settings>Syntax highlighting color > White/Dark setting. Therefore it is not in sync with the Windows Dark -theme that is read on startup.

But: Shouldn't the Syntax highlighting (White/Dart) automatically follow the Dark/light theme read from the system on startup as everything else is now?

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Mon, 25 Mar 2019 11:29:40 GMT
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gdal - I had the same problem, now fixed.

As for that warning background, it is fixed in "Dark theme" predefine for highlighting, but you need to set it to Dark again.

Syntax highlighting should not read Dark/Light, because that would overwrite user's settings.

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Mon, 25 Mar 2019 13:02:45 GMT
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How about having a selection (Check box?) called "Automatic" in Syntax highlighting? It would simply call what Dark or White buttons call when initializing TheIDE using system theme. Running on either dark or light theme really calls for pressing either of the buttons depending on your selected theme. Unless, of course, the user is interested to tune some of the colors to personal preference.

Anyway, this is not so important after all... Just my personal preference when working in changing lighting conditions. The important things on the platform side have been dealt with already, so all that matters is just fine! (If I find any issues, I will return! It all seems good now.)

Thanks and best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Fri, 29 Mar 2019 08:30:56 GMT
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Hi Mirek,

It turned out that there are many readability issues when using dark theme colors on Windows 7.

- Toolbar
- Menubar
- ArrayCtrl headers
- e.g. Settings dialog in TheIDE

On Windows 10 you solved the same already.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Fri, 29 Mar 2019 09:54:35 GMT
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Well, dark theme with Win 7 is completely different path (as there the colors are comming from the system).

Anyway, I have just finished another iteration of dark theme issues, so please recheck everything and report.

First of all, immediately after delivering one release on my app with dark theme support, I had reported it as error

So now you have to activate simulated Win10 dark theme by Ctrl::SetDarkThemeEnabled at the start of GUI_APP_MAIN.

Another new features:

bool IsDarkTheme();

Color AdjustIfDark(Color); // adjusts color for dark them if it is active

Also, previously deprecated functions SWhite, SRed().... are now reactivated and represent "dark theme adjusted colors". So if you want to put Red color somewhere, if you use SRed, it will be accordingly converted in dark mode (somewhat pink-ish).

I will try to write some docs about dark theme support soon... (probably as well as about UHD).

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Fri, 29 Mar 2019 15:31:53 GMT
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Hi Mirek,

On Windows 10 it all still works (after adding Ctrl::SetDarkThemeEnabled();).

On Windows 7 the symptoms I mentioned in my last message remain.

Another thing I noticed is that Windows 10 1809 does not alter any icon color at all (or maybe just pure black/white) when switching between light and dark themes. (Please take a look at Windows "File Explorer" toolbar icons while toggling between Light and Dark app modes on Windows > Settings > Personalization > Colors.) For this to work properly, all icons must be colored in a way that prevents them from sinking into the background. Sorry to bring this up this late down the road, but after using TheIDE with dark theme for a while, I have now noticed that I have some difficulty to identify certain TheIDE icons (e.g. Build and Rebuild All on the toolbar) in their dark variant. This may be related to the fact that I have red-green colorblindness (as about 8 % of males do). Using light theme icons on dark background would in most cases work better for me after all. Of course there are some icons that would need to be changed in order to be visible on both dark and light backgrounds. This involves changing from black to mid-grey to support both white and black backgrounds with a single icon.

I tried this by commenting out the following code in function Iml::Get(int i) in Iml.cpp:
```
//     if(gui_image && IsDark(SColorPaper()))
//      m.image = DarkTheme(m.image);
```

The result is easier for me to work with. Some icons (the dark ones including, but not limited to compile (C++) and preprocess (#)) would need a new lighter color tone that is closer to mid range intensity.

Best regards,

Tom

Subject: Re: Please check the list of 2019.1 changes
Posted by mirek on Sat, 30 Mar 2019 09:22:33 GMT
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Tom1 wrote on Fri, 29 March 2019 16:31Hi Mirek,

On Windows 10 it all still works (after adding Ctrl::SetDarkThemeEnabled();).

On Windows 7 the symptoms I mentioned in my last message remain.

Well, M$ dropped the support for Win7 and we have not made it worse by recent changes, so... it will perhaps have to wait before I have some Win7 machine again.

Quote:
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"File Explorer" toolbar icons while toggling between Light and Dark app modes on Windows > Settings > Personalization > Colors.) For this to work properly, all icons must be colored in a way that prevents them from sinking into the background. Sorry to bring this up this late down the road, but after using TheIDE with dark theme for a while, I have now noticed that I have some difficulty to identify certain TheIDE icons (e.g. Build and Rebuild All on the toolbar) in their dark variant. This may be related to the fact that I have red-green colorblindness (as about 8 % of males do). Using light theme icons on dark background would in most cases work better for me after all. Of course there are some icons that would need to be changed in order to be visible on both dark and light backgrounds. This involves changing from black to mid-grey to support both white and black backgrounds with a single icon.

Oh great...

Mirek

Subject: Re: Please check the list of 2019.1 changes
Posted by Tom1 on Sat, 30 Mar 2019 11:50:03 GMT
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mirek wrote on Sat, 30 March 2019 11:22Tom1 wrote on Fri, 29 March 2019 16:31Hi Mirek,

On Windows 10 it all still works (after adding Ctrl::SetDarkThemeEnabled();).

On Windows 7 the symptoms I mentioned in my last message remain.

Well, M$ dropped the support for Win7 and we have not made it worse by recent changes, so... it will perhaps have to wait before I have some Win7 machine again.

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Oh great...

Mirek

Dark theme support on Windows 7 is not critical for me, but as I found it out during testing, I wanted to let you know. Leaving it as it is, is OK with me.

As for the question with icon coloring/theming, I understand your frustration about it and I'm truly sorry I have not been able to realize this before. I'm trying to be helpful, but I understand this is not always the case.

Then again, I do not know where Microsoft is going with this subject either. Anyway, the dark theme support has evolved gradually during recent Windows 10 upgrades and there is no evidence that it would stop here. Next update is just around the corner and news on the preview versions point out some slight changes again.

But in the end, you decide how U++ deals with this.

Best regards,

Tom
