

If I understand your example right...

```
class CachedSQL : public CallbackThread
{
public:
void GetDataGiveToAnswerer(String request)
{
    int rqIndex = data.Find(request);
    bool needAdd = false;
    String answer;
    if (rqIndex < 0)
    {
        answer = FetchFromDatabase(request);
        needAdd = true;
    }
    else
        answer = data[rqIndex];
```

```
theAnswersProcessor.AddTask(HttpAnswersProcessor::ProcessData, request, answer);
```

```
    if (needAdd)
        data.Add(request, answer);
}
};
```

```
class HttpRequestsProcessor : public CallThread
{
public:
void ProcessHttpRequest(String rq)
{
    //some processing here

    //ok, you need users`s info
    theCachedSQL.AddTask(CachedSQL::GetDataGiveToAnswerer, user);

    //optional additional processing
}
};
```

```
class HttpAnswersProcessor : public CallThread
{
public:
void ProcessHttpAnswer(String userInfo)
{
    //some processing and sending answer
```

```

}
};

////////////////////////////////////
// Let`s imagine 2 users sent their requests simultaneously.
//
// Time offset:
// 0      1      2      3      4      5      6      7
// 012345678901234568901234567890123456789012345678901234567890
//-----
// Synchronous work
// |--request1--|--sql1--|--answer1--|--request2--|--sql2--|--answer2--|...
// user1 will wait 3.5
// user2 will wait 6.9
//-----
// Asynchronous work; '%' symbol stands for queue event i/o/thread-awake
// |--request1--|
//      %|--sql1--| *cache-miss; adding to data AFTER answer answer sent to httpAnswerer*
//      %|--answer1--|
//      |--request2--|
//      %|--sql2--| *value cached, no need to add this time*
//      %|--answer2--|
// user1 will wait 3.2
// user2 will wait 4.8
//-----

```
