

# hetrodo.Utilities.MainThread

This is a wrapper class for executing heavy calculations without freezing the main thread but still using unity's api (like transform.position, Instantiate, Destroy, etc).

## Reference

### MainThread

- Exec(System.Action action) -> (method)(synchronous) Executes an action on the main thread, and freezes its caller thread until execution.
- ExecAsync(System.Action action) -> (method)(asynchronous) Executes an action on the main thread without freezing.
- IsRunning -> (field) Tells if you had already initialized the MainThread class.
- OnExceptionCaught(Exception ex) -> (event) If any exception occurs while executing the actions, this event will be fired.

### MainThread.Timing

- DeltaTime -> (field) Time since last call for each thread.

## Tips

Try to minimize MainThread.Exec usage, as every call will add at least 25ms to your code.

If you are using the MainThread.ExecAsync in a loop be sure to add a Thread.Sleep to not overflow the execution pool.

## Syntax

```
void Start()
{
    //Initializing MainThread class
    _ = new MainThread();

    new Thread(() =>
    {
        MainThread.Exec(() => { print("Executed on unity"); });
        MainThread.Exec(Boo);
        print("Executed outside unity");
    }).Start();
}

void Boo()
{
    print("Executed on unity");
}
```

