



# Minimaps

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# What's a minimap?

- Miniature representation
- Guide the player through the world
- Show the position of important elements



# The use of the minimap

## Inmersion



*The Legend of Zelda: Breath of the Wild*

## Position



# Characteristics of a minimap



*The Witcher 3: Wild Hunt*



*Starcraft 2*

# The future of minimaps



*Monster Hunter World*



*Assassin's Creed Origins*

**Implementation in code**

# Code structure

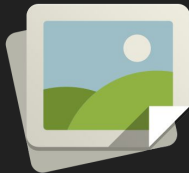
Minimap

Player

Start

PostUpdate

PreUpdate

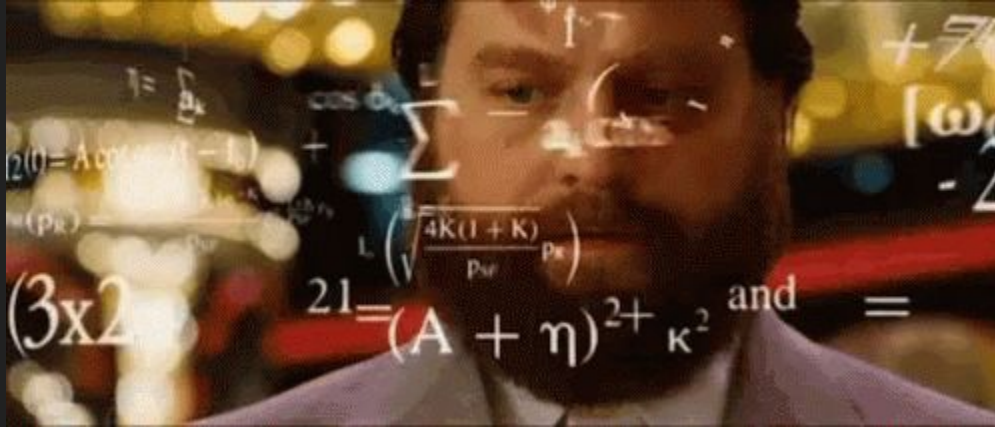


```
public iPoint j1Minimap::ScreenToMinimapToWorld(int x, int y) {  
    //TODO 5: Fill this function to convert a position from screen to the Minimap and directly to world  
    iPoint minimap_position = {0,0};  
    return minimap_position;  
}
```



# TODO 1: Calculate the dimensions of the minimap

You should determine the scale calculating the map size and relating it to the target map width given in config.





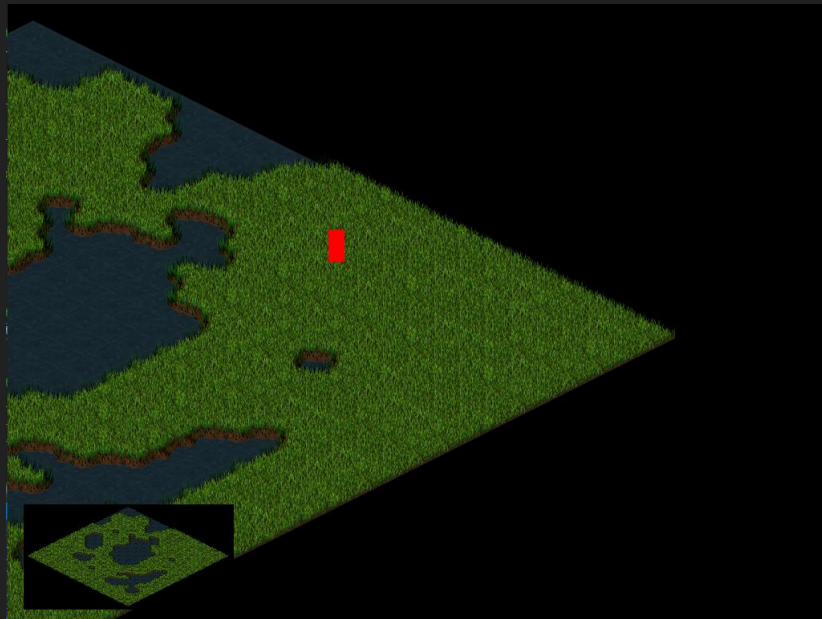
## TODO 2: Create a texture for the minimap

- Create a texture not only a pointer to it.
- Check [SDL\\_CreateTexture](#) for further details



## TODO 3: Set this texture as a rendering target and create the minimap

- Check [SDL\\_SetRenderTarget](#) for further information on how to save the information from the render into a texture.
- Don't forget to untarget the texture when you have finished drawing the map!



**TODO 4.1:** Fill the function `WorldToMinimap` to make the representation of the rect in the minimap be in the position it should



**TODO 4.2:** Using `WorldToMinimap` create a white rect which represents the area that the camera records of the world onto the minimap



## TODO 5: Convert a position from the screen to the Minimap and directly to world

- Fill the function which can convert a screen position into world coordinates knowing the minimap position and the scale.



## TODO 6: Transform the position of the mouse into Minimap coordinates and then to the world

- You should use the function made in the last TODO



## TODO 7: Move the camera when the player clicks on the minimap or scrolls the mouse on it while holding the left button

- It should only detect the mouse when it is over the minimap.
- Be aware of the final sign of the camera position!



# Homework

- Add more icons onto the minimap.
- Try replacing the squares by textures.
- Using the config file try changing the corner in which the minimap, the margin and the width.
- Try replacing the black background by a colored one.





**Thank you for your attention!**

