

## Camera

The screen is your viewport

# BACKGROUND

- Making your game world larger than one screen is relatively simple.
- This is mainly for 2D games, but the principle applies to 3D too.

# BASIC IDEA

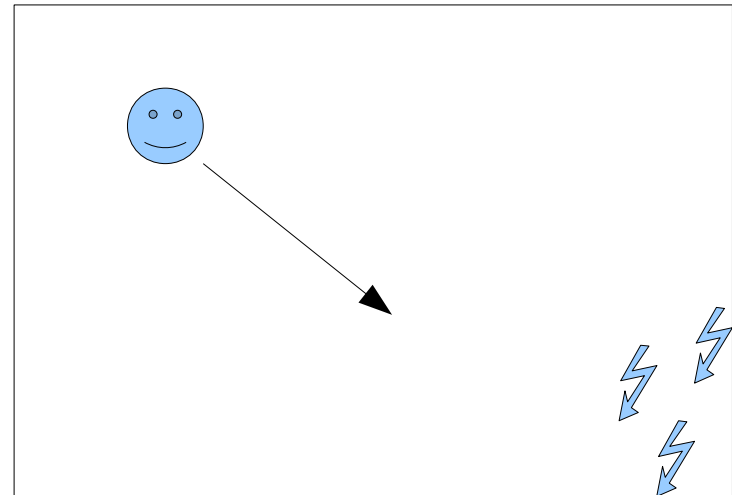
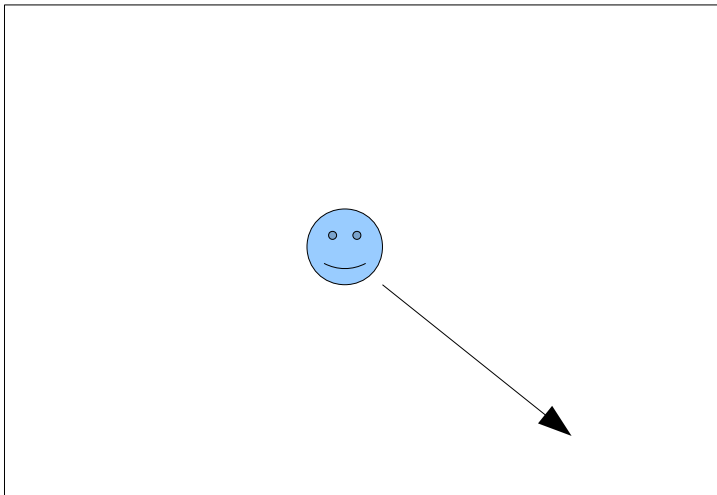
- Camera points at our point of interest, say, player's character.
- When the player moves, the camera moves.
- Player's character stays more or less immobile, the world moves around.

# IN PRACTISE

- Camera stays put, world moves!
- "Worldx, Worldy"
- Apply world coordinates to all draws
  - `drawsprite(sprite-x-worldx, sprite-y-worldy);`
- Everything must support clipping!

# FURTHER TRICKS

- Instead of pointing at the player, point slightly towards where player is moving!



- Instead of using the values directly, apply some low pass filtering!

# OPTIMIZATION

- Don't draw what's not on screen!
- You can do a relatively cheap collision check with the screen (rect-rect) and skip rendering.
- Whether you can skip AI and related processing depends on the game.