

Main

Name	Data Type	Format	Description	Example	Valid Range
gameRunning	Boolean	N	Flag to determine if the game has been quit or not	true	true/false
window	SDL_Window*	-	Pointer the the window the game is displayed on	0x7ffebfafb558	-
renderer	SDL_Renderer*	-	Pointer to the renderer tied to the window of the game	0x7ffd465a7630	-
eventHandler	SDL_Event	-	Stores the keyboard and mouse events	-	-
scaleFactor	double	NN.NN	Contains the scaling factor between the positions stored and position on screen	0.96	>0
playerList	forwardList	-	Stores all player objects in the game	-	-
wallContainer	forwardList	-	Stores all walls in the game	-	-
projectileList	forwardList	-	Stores all active bullets fired by players in the game	-	-
character	Player	-	Iterator for loops passing through the playerList	-	-
bullet	Projectile	-	Iterator for loops passing over the projectileList	-	-
newList	forwardList	-	Contains a temporary copy of the projectileList to use when updating	-	-

			the projectiles		
wall	Wall	-	Iterator for objects passing over the wallContainer	-	-

Player

Name	Data Type	Format	Size for Display	Description	Example	Valid Range
playerRect	SDL_Rect	{ x, y, w, h }	-	Rect object containing the location of the top left corner of the player, and their width and height in the game	{ x: 52, y: 403, w: 32 h: 32 }	-
angle	double	NNN.NN	-	Contains the angle the player is looking in	72	0-360
centreX	int	NNNN	-	Contains the X coord of the centre of the player sprite	123	-
centreY	int	NNNN	-	Contains the X coord of the centre of the player sprite	382	-
radius	int	NN	-	Contains the radius of the player sprite	16	>0
velx	double	NN.NN	-	Speed of the player along the x axis	4.8	-

vely	double	NN.NN	-	Speed of the player along the y axis	2.2	-
red	int	NNN	-	Red hue of the player sprite	12	0-255
green	int	NNN	-	Green hue of the player sprite	84	0-255
blue	int	NNN	-	Blue hue of the player sprite	188	0-255
currAmmo	int	NN	-	Number of shoots the player can shoot before reloading	12	>=0
reloadFramesLeft	int	NNN	-	Number of frames left in the players reload animation	128	>=0
mousePressFirst	bool	N	-	Stores whether the mouse button was pressed on the previous frame	true	true/false
id	int	NN	-	The unique ID number of the player object	1	>0
playerImage	SDL_Texture*	-	Default width/height: 32px	The spritesheet of the player	-	-

Wall

Name	Data Type	Format	Size for Display	Description	Example	Valid Range
wallLocation	SDL_Rect	{ x, y, w, h }	-	Contains the location of the top left corner and the width and height of the wall	{ x: 232, y: 199, w: 90, h: 120 }	-
red	int	NNN	-	Red hue of the wall	54	0-255
green	int	NNN	-	Green hue of the wall	52	0-255
blue	int	NNN	-	Blue hue of the wall	53	0-255

Projectile

Name	Data Type	Format	Size for Display	Description	Example	Valid Range
projectileRect	SDL_Rect	{ x, y, w, h }	-	Stores the location of the top left corner and the width and height of the image	{ x: 303, y: 12, w: 8, h: 8 }	-
centreX	int	NNNN	-	Stores the X-coordinate of the bullets centre	307	-
centreY	int	NNNN	-	Stores the Y-coordinate of the bullets centre	16	-
angle	double	NNN.NN	-	Stores the angle of the bullets centre	91.2	0-360
radius	int	NN	-	Radius of the projectiles image	4	>0
velx	double	NN.NN	-	Speed of the projectile on the x-axis	1.4	-
vely	double	NN.NN	-	Speed of the projectile on the y-axis	8.2	-
currPosX	double	NNNN	-	Double variant of the x-coord of the left side	303.2	-

				for more accurate positions		
currPosY	double	NNNN	-	Double variant of the y-coord of the left side for more accurate positions	12.4	-
red	int	NNN	-	Red hue of the projectile	43	0-255
green	int	NNN	-	Green hue of the projectile	199	0-255
blue	int	NNN	-	Blue hue of the projectile	248	0-255
projectileImage	SDL_Texture*	-	Default width/height: 8px	Spritesheet of the projectile	-	-