

# Pygame Game – Tower Defense

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# Abstarct

The purpose of this game is to defeat all enemies before they reach the tower. User has a choice of several weapons with different parameters which they use to stop a number of opponents.



# Requirements

All requirements for this application will be described by so called “MoSCoW Prioritisation”, where M stands for must have, S for should have, C for could have (optionally have) and W for something that won’t be done this time.

M	1. variety of defensive towers 2. variety of enemies 3. cash counter 4. live counter
S	1. improvement of defensive towers 2. instructions how to play
C	1. possibility of changing the layout of the board 2. ranking
W	1. multiplayer mode

## Business Case

1. User chooses board layout
2. User places defensive towers
3. User pushes start button
4. Program starts the movement of enemies
5. User defeats enemies
6. User upgrades towers or buys new ones
7. Program continues the movement of enemies

## Use cases

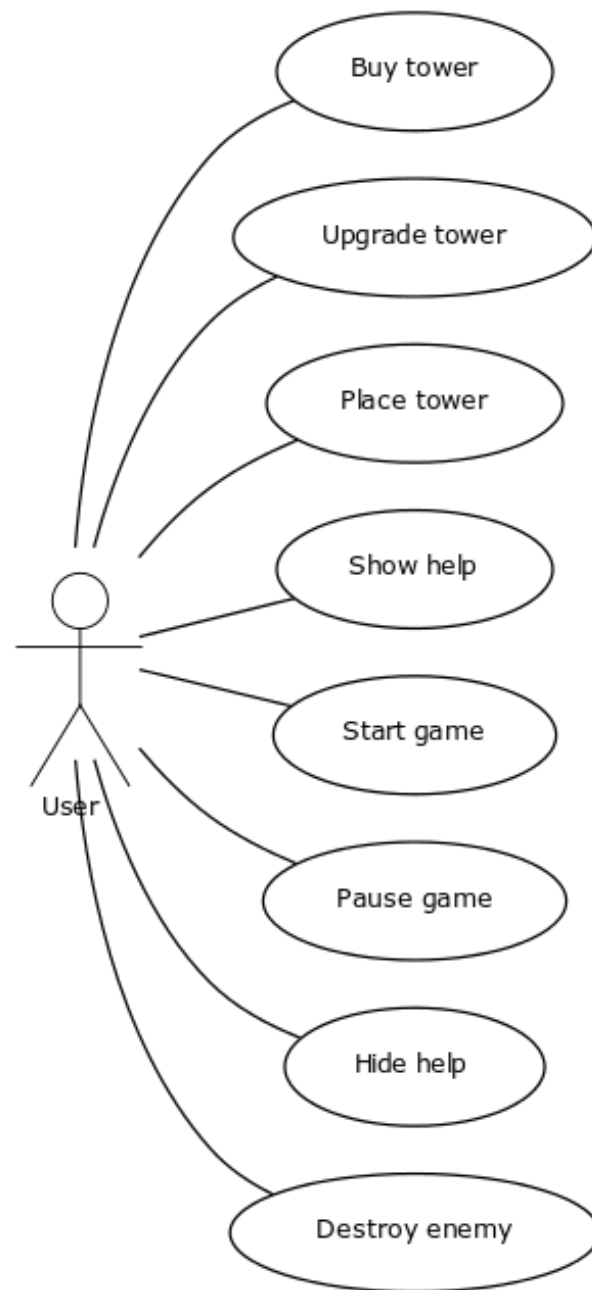


Diagram 1 Use cases

## Use cases description

Code	UC – Main
Name	Main Case
Actors	User
Initial conditions	
Description	<ol style="list-style-type: none"><li>1. User chooses board layout</li><li>2. User places defensive towers</li><li>3. User pushes start button</li><li>4. Program starts the movement of enemies</li><li>5. User defeats enemies</li><li>6. User upgrades towers or buys new ones</li><li>7. Program continues the movement of enemies</li></ol>

Code	UC – BuyT
Name	Buy towers
Actors	User
Initial conditions	
Description	<ol style="list-style-type: none"><li>1. User chooses tower from list.</li><li>2. User pays for tower.</li><li>3. Cash counter decrease.</li></ol>

Code	UC – UpgradeT
Name	Upgrade towers
Actors	User
Initial conditions	Placed tower on board
Description	<ol style="list-style-type: none"><li>1. User selects tower on board.</li><li>2. User upgrades it.</li><li>3. Cash counter decrease.</li></ol>

Code	UC – PlaceT
Name	Place tower
Actors	User
Initial conditions	Bought tower
Description	1. User chooses place on board 2. User clicks on board. 3. Tower is placed.

Code	UC – ShowH
Name	Show Help
Actors	User
Initial conditions	
Description	1. User click on the button. 2. Program shows instruction how to play.

Code	UC – HideH
Name	Hide help
Actors	User
Initial conditions	Help on the screen
Description	1. User pushes the button 2. Program hides instruction how to play.

Code	UC – StartG
Name	Start game
Actors	User
Initial conditions	
Description	1. User pushes the button. 2. Program starts the movement of enemies.

Code	UC – PauseG
Name	Pause game
Actors	User
Initial conditions	Started game
Description	1. User pushes the button. 2. Program stops the movement of enemies.

Code	UC – DestroyE
Name	Destroy enemy
Actors	User
Initial conditions	Started game
Description	1. Placed towers deal damage to enemies. 2. The enemy is defeated. 3. Cash counter increase.
Alternative	2A. The enemy reaches the main tower. 3A. Live counter decrease.