**Tower Defense Game Flow**

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# Open

1. Double Click on Template Icon on Template Select
   1. Prompt will appear asking you to name your Game
   2. Once name is entered, click on Create
2. The Level Select Scene will load
3. Click on the **Asset Library** button
   1. You will need to upload all images and sounds to your project, except GUI and card part images
   2. Click on Static on the left, then click on a Create New box
   3. This will open up the Image Constructor
   4. Type a name to the Image Name text field
   5. Click on **Browse** to find where you image is on your computer
   6. If the image has frames use the dropdown for Image Type and change to cells
      1. If cells add how many Rows and Columns in the fields below
   7. Give image a tag from the Template Tag dropdown
      1. Once you have picked a Tag, click on the Plus Icon next to the dropdown
      2. If you want to remove a Tag from the Image, click on the X icon in the Tag container that appeared to the right of the dropdown
   8. Click on Save
   9. Repeat as needed until all images are uploaded, you will need to switch to Fonts and Levels in the **Asset Library** (you will not need any animations in Blackjack)
4. Close the **Asset Library** when finished

# General Settings

1. Click on the **General Settings** button
   1. Items to change
      1. Font Sheet
         * Click on Select to search the **Asset Library** for the font you want to use
      2. Level Order
         * The first 2 levels will be provided from the template
         * You can click on the **Minus** sign to remove a level from the list
         * Click on **Add Level** to open the **Asset Library** to select another level to put in the level order
2. Switch to the **Sound** tab in **General Settings**
   1. Click on Select to search the **Asset Library** for the sounds/music you want to use
3. Click on **Save** at the top when finished, then **Close**

# Interface Tool

1. Click on the **Interface Tool** button
2. For the Menu Screen tab click on the **Select** buttons and search the **Asset Library** and add the following
   1. Title Screen
   2. Play Button
   3. How to Play button
   4. Credits Button
   5. For each of the buttons you can use the dropdown to switch between the different states of the button and pick a different image for each
3. Switch to the **Level Screen** tab
   1. Click on the Select buttons and search the Asset Library and add the following Images
      1. Bottom Container Image
      2. Wave Container
      3. Live/Currency/Points Container
      4. Pause Button
      5. Health Icon
      6. Currency Icon
      7. Wave Icon
      8. Points Icon
      9. Tower Firing Radius
      10. Upgrade Button
      11. Sell Button
      12. Accept Button
      13. Cancel Button
      14. Start Wave Button
4. Switch to the **Win/Lose** **Screen**
5. Click on the **Select** buttons and search the **Asset Library** and add the following
   1. Win Screen
   2. Lose Screen
   3. For each of the buttons you can use the dropdown to switch between the different states of the button and pick a different image for each
6. Switch to the **Pause Screen**
7. Click on the **Select** buttons and search the **Asset Library** and add the following
   1. Pause Background Image
   2. For each of the buttons you can use the dropdown to switch between the different states of the button and pick a different image for each
8. Switch to the **How to Play Screens** tab
   1. Use the dropdown to determine how many Help Screens you want to appear in game
   2. Click on the **Browse** button to find the image on your computer for each Help Screen
   3. On all the buttons, click on the **Browse** button to find the image on your computer
      1. Use the dropdown to switch between the different button states
      2. You will need to add a different image for each button state
9. Switch to the **Credits** tab
   1. Click on the checkbox to determine if you want the credits button to be visible on the menu screen or not
   2. Click on the **Browse** button to locate the text file needed for the credits, a default text file should already exist in the game folder
   3. Click on the **Browse** button to find the image on your computer for the credits background
   4. On the button, click on the **Browse** button to find the image on your computer
      1. Use the dropdown to switch between the different button states
      2. You will need to add a different image for each button state
10. Click on **Save** at the top when finished, then **Close**

# Level Editor

1. Click on the **Level Tool** button
2. Give the Level a name
3. Use either the text field to enter a value or the up and down arrows to change the Starting Lives and Starting Currency
4. Click on **Select** to open the **Asset Library** and select the background music you want to play
5. Click on **Save** at the top when finished, then **Close**

# Enemy Tool

1. Click on the **Enemy Tool** button
2. Select which enemy to edit from the dropdown
   1. If you want to add a new enemy, click on the Plus sign on the right of the dropdown
   2. If you want to delete an enemy, click on the Minus sign on the right of the dropdown
3. Give the enemy a name
4. Use the dropdown to select how fast the enemy moves
5. Either enter a value in the text field or use the arrows to adjust the enemies
   1. Health
   2. Damage (amount of Lives lost when they reach the End Point on the path)
   3. Score
   4. Funds (amount of Currency received when killed)
6. Click on the **Select** button to open the **Asset Library** to select a **Death Sound** for the enemy
7. On the right select whether the enemy will be a **Static Sprite** or an **Animation**
   1. If **Static Sprite** is selected, click on the **Select** button and find the image to use in the **Asset Library**
      1. After the image has been selected, if it is part of a cell sheet, use the arrows to find the cell to use
      2. If you want the image to face the direction the image is moving, click on the **Auto-Rotate** checkbox to enable it
   2. If **Animation** is selected, click on the Select button and find the **Animation Set** to use in the **Asset Library**
8. Use the dropdown below the Preview to make sure the Static Sprite or Animation show all the directions for both Movement and Death
9. Click on **Save** at the top when finished, then **Close**

# Projectile Tool

1. Click on the **Projectile Tool** button
2. Select which projectile to edit from the dropdown
   1. If you want to add a new projectile, click on the Plus sign on the right of the dropdown
   2. If you want to delete an projectile, click on the Minus sign on the right of the dropdown
3. Give the projectile a name
4. Either enter a value in the text field or use the arrows to adjust the projectiles Damage that it will do to oncoming enemies
5. If you want the Projectile to have a Special Effect when it hits enemies, the use the dropdown to select an Effect and adjust the values that appears
   1. None – No effect on enemies other than damage
   2. Slow Enemy Movement – decreases enemy movement for a period of time, values to change
      1. Slow Enemy Down by % - decreases speed by what percent
      2. Effect Duration – how long the effect lasts
   3. Splash Damage – base damage is done to target enemy, splash damage is done to enemies in radius of splash, values to change are
      1. Splash Damage – How much damage surrounding enemies receive
      2. Splash Radius – How many squares away does the splash damage affect
      3. For How Long – How long the damage will affect that area (for lingering effects)
   4. Piercing Damage – projectile will hit target enemy and a number of enemies behind them, values to change are
      1. Number of Enemies – How many enemies the projectile will go through
6. On the right select whether the projectile will be a **Static Sprite** or an **Animation**
   1. If **Static Sprite** is selected, click on the **Select** button and find the image to use in the **Asset Library**
      1. After the image has been selected, if it is part of a cell sheet, use the arrows to find the cell to use
   2. If **Animation** is selected, click on the Select button and find the **Animation Set** to use in the **Asset Library**
7. Use the dropdown below the Preview to make sure the Static Sprite or Animation show all the directions for both Travel and Hit
8. Click on **Save** at the top when finished, then **Close**

# Tower Tool

1. Click on the **Tower Tool** button
2. Select which tower to edit from the dropdown or from the Tower Tree
   1. If you want to delete an enemy, click on the Minus sign on the right of the dropdown
3. Give the tower a name
4. Use the dropdown to select how far the tower fires at oncoming enemies
5. Use the dropdown to select how fast the tower fires at the oncoming enemies
6. Either enter a value in the text field or use the arrows to adjust the towers
   1. Purchase Cost
   2. Selling Value (a percent of the purchase cost)
7. Click on the **Select** button to open the **Asset Library** to select a **Projectile Firing Sound** for the tower
8. On the right select whether the enemy will be a **Static Sprite** or an **Animation**
   1. If **Static Sprite** is selected, click on the **Select** button and find the image to use in the **Asset Library**
      1. After the image has been selected, if it is part of a cell sheet, use the arrows to find the cell to use
   2. If **Animation** is selected, click on the Select button and find the **Animation Set** to use in the **Asset Library**
9. Below that is the Tower Slot Icon, click on the **Select** button and find the image to use in the **Asset Library**
   1. After the image has been selected, if it is part of a cell sheet, use the arrows to find the cell to use
10. Use the dropdown below the Preview to make sure the Static Sprite or Animation show all the directions for all directions for both Idle and Firing
11. Click on **Save** at the top when finished, then **Close**

# Wave Tool

1. Click on the **Wave Tool** button
2. From the dropdown select which wave to edit
   1. If you want to add a new wave, click on the Plus sign on the right of the dropdown
   2. If you want to delete an wave, click on the Minus sign on the right of the dropdown
3. Give the wave a name
4. If you want to copy an existing wave, use the dropdown to find the wave you want to copy, then click on the Copy button on the right of the dropdown
   1. Note: If you have some slots filled up with enemies before you copy a wave, this will replace those enemies
5. Either enter a value in the text field or use the arrows to adjust the waves Default Spawn Delay
6. Use the dropdown to select a Default Path
7. Click on the **Select** button to open the **Asset Library** to select a **Wave Start Sound** for when the wave begins in the game
8. Choose between either Timed or Manual, this will determine how the wave starts in the game
   1. If Timed, either enter a value in the text field or use the arrows to adjust how many seconds before the next wave begins after the last enemy has spawned from the previous wave
   2. If Manual, the player will need to click the Start Wave Icon in the game for the wave to begin
9. At the bottom, use the dropdown to select which enemy you want to place in the wave
   1. There is a separate fields to adjust the Spawn Delay and Path that will be only for the selected enemy and not affected by the Default Spawn Delay and Default Path
10. When you have your enemy selected, you can click on either the Add Enemy in a new wave slot or on the Replace icon in an existing wave slot
    1. You can also adjust the Spawn Delay and Path that will be only for the selected enemy and not affected by the Default Spawn Delay and Default Path
11. Click on **Save** at the top when finished, then **Close**

# Terrain Tool

1. Click on the **Terrain Tool** button
2. On the Graphics tab, click on the Plus icon to open the Asset Library and choose a Sprite or Tiled Sprite sheet to upload to the Terrain Tool
3. Select which graphic you want to use, from there you have the options of
   1. Painting the selected tile on the map
   2. Filling the open space of the map with the selected tile
   3. Erase the selected tile when you click on it in the map
   4. Rotate the selected tile either left or right before painting
4. Click on the Paths tab
5. Edit the names of the paths you want to include in the level
6. To edit a path, click on the Edit button below the name
7. Click on either the Start Point, End Point, or Path icons, then you have the options of
   1. Painting the selected tile on the map
   2. Filling the open space of the map with the selected tile
   3. Erase the selected tile when you click on it in the map
8. Click on the Towers tab
9. Click on the Tower icon, then you have the options of
   1. Painting the selected tile on the map
   2. Filling the open space of the map with the selected tile
   3. Erase the selected tile when you click on it in the map
10. Click on **Save** at the top when finished, then **Close**

# Animation Set Selector

1. Click on new in the Asset Library
2. Select a radio button to create either a Tower, Enemy, or Projectile animation set
3. Click on Create to open that Animation Set tool

# Enemy Animation Set Tool

1. Click edit on an existing Enemy Animation Set or come from the Animation Set Selector
2. Give the Enemy Animation Set a name
3. For both tabs, click on the Select button to bring up the Asset Library to find the animation to use for the enemy
   1. If you only have 2 movement directions, then check the Mirror checkboxes on the 2 that you have, and it will flip the animation for the other direction
      1. Example: Have an East Movement but no West Movement, after selecting the East Movement from the Asset Library, click on the Mirror checkbox, now the West Movement has been filled in
4. Click on **Save** at the top when finished, then **Close**

# Projectile Animation Set Tool

1. Click edit on an existing Projectile Animation Set or come from the Animation Set Selector
2. Give the Projectile Animation Set a name
3. For both tabs, click on the Select button to bring up the Asset Library to find the animation to use for the projectile
4. Click on **Save** at the top when finished, then **Close**

# Tower Animation Set Tool

1. Click edit on an existing Tower Animation Set or come from the Animation Set Selector
2. Give the Tower Animation Set a name
3. For both tabs, click on the Select button to bring up the Asset Library to find the animation to use for the tower
   1. If you only have 2 movement directions, then check the Mirror checkboxes on the 2 that you have, and it will flip the animation for the other direction
      1. Example: Have an East Idle but no West Idle, after selecting the East Idle from the Asset Library, click on the Mirror checkbox, now the West Idle has been filled in
      2. For the Angles (Northeast, Southeast, etc.) after you select the Mirror checkbox, you will need to specify from the dropdown with direction to mirror
4. On the Idle tab, use the dropdown to Select which direction you want to be the default animation when the tower is placed in the level
5. Click on **Save** at the top when finished, then **Close**

# Save and Publish

1. Now that you have everything filled out, go to File and Save the current state of your game
2. In the File Menu, click on Test Game
   1. If everything works and is how you want it, continue to step 3
3. In the File Menu, click on Publish, then choose which platform you wish to publish to
4. A dialog will appear for the desired platform, follow the steps then click on Publish