

SENIOR CODERZ

Mr. Saver Team

Techno Kids Techno Future Damanhour.

GDD

GAME DESIGN DOCUMENT

GAME ANALYSIS

Our game is about helping in saving the earth resources. It consists of many challenges to grow up trees and collect solar powers and use the water drops of rain in a useful way. It has a lot of fun and entertainment.

MISSION STATEMENT

In Game has three challenging levels that leads you to continue playing to win the game.


- Title: Mr. Saver game.
- Platform: MIT app inventor.

Saver has to overcome falling rain drops to the ground in CH1, He should overcome time of 6 seconds to get solar power.



STORYLINE & CHARACTERS

This is where you present a story summary, information on the key characters in the game, including descriptions, abilities, characteristics, how they fit into the story, how they affect gameplay, what the player will learn from them, etc.

Character	Description	Characteristics	Misc. Info
<p>Character Name</p> 	<p>Our character is called (Mr.Saver). He is a playable character in our nice game.</p>	<p>Mr. Saver is so strong. He has many abilities such as:</p> <ul style="list-style-type: none"> • Lift heavy Buckets. • Lift wind fans. • Jump big height. • Move fast. 	<p>Mr. Saver is so helpful. He wants to help Earth resources.</p>

Player Experience

According to our game map, First, You will see Mr. Saver is waiting for you. Furthermore, He will be holding an empty Bucket that you will collect the falling water drops in Challenge 1. Then He will go to Challenge 2. You should water the grass with four buckets of water to grow up trees and collect the parts of wind fan so you have to collect them and search for the location of the hummer to build a new windmill. In Challenge 3, You will find a sun moves in horizontal line so you must press on Mr. Saver to enables him to jump high distance to get solar energy sun before time runs out.


Game Objectives & Rewards

This is where you present more details on how the gameplay will motivate the player to progress through the game. Discuss rewards and penalties “if found” and the difficulty level. You can use the table below to help break down objectives and rewards.

Rewards	Penalties	Difficulty Levels
<ul style="list-style-type: none"> CH1: Player has score counter and extra points to motivate player. In CH2, Player has score counter and a progress bar which increase when he grow up trees and fix the new windmill. In CH3: Player has energy counter increases every time he catches sun. 	<p>In CH1, The penalties are:</p> <ul style="list-style-type: none"> The speed of the fall of the drop. The different sites of the falling drop. <p>In CH2, The penalties are:</p> <ul style="list-style-type: none"> The hidden location of the hummer. The location of the buckets and wind fans. <p>In CH3, The penalties are:</p> <ul style="list-style-type: none"> The speed of movement of the sun. 	<p>Our difficulty challenge level is challenge 2.</p> <p>As you must search of the hummer in a large land to press it to fix a new windmill which changes the kinetic energy of wind into electric energy.</p>

Gameplay Mechanics

This is the where you start getting more specific on how some of the systems in the game will work. This includes how characters move in the game, what gameplay actions are available, item inventory and attributes, and how the game progresses from level to level.

Character Attributes	
Character	Movement Abilities / Actions Available
<p>Mr. Saver</p> 	<ul style="list-style-type: none"> In CH1: You can move the character by the two arrows below to move right or left direction. In CH2: You have to drag the character to move to the location you need. In CH3: You should press on the character to enable him to jump up on a great height to catch the sun.

Game Modes	
Our game mode is so challenging mode which allies with fun to save earth resources.	Our game aims to help our earth resources such as: Minerals, Wind, Water, Rain, Sunlight and etc.... Because many dangerous things damage the earth as the global warming phenomenon. You can go to the next challenge by pressing go to next challenge button.
Scoring System	
Points/Coins/Stars/Etc.	How it's Awarded & Benefits
<ul style="list-style-type: none"> In CH1: You have to score 30 points to win. In CH2: You have to score 100 points to win. In Ch3: You have to score 20 points to win the game. 	<ul style="list-style-type: none"> In Ch1: You should collect 30 water rain drop to win. In CH2: You have 2 missions: <ol style="list-style-type: none"> You have to collect the buckets to water the grass so your score will increase by 50. You have to collect the parts of wind fans and touch the hummer to fix the windmill so score will increase by 50. In CH3: You must press on Mr. Saver to make him jump to get solar power.

Level Design:

In our interesting game, We have 3 Challenges levels that we must work hard to win them.

- CH1:

You must press “play button” to start the challenge. First, the rain drops will be fallen and you have to catch them before they fall on the ground knowing that the difficulty here is the speed of the falling rain drops and the difference of the sites of falling the drops. Be careful that you shouldn't miss the ice because it is an extra point for you.

- CH2:

There are four buckets of different colours:

- The **brown** bucket increases the score by **5**.
- The **green** bucket increases the score by **10**.
- The **red** bucket increases the score by **15**.
- The **blue** bucket increases the score by **20**.

And there are four fan parts we must collect them and search for the hummer to build new windmill.

- CH3:

There is a sun on the top we must press on the character (Mr. Saver) so he will jump high distance to get solar power .

Levels

CH1:



- In CH1:

We must press on play button to start .We can see four rain drops that falls and Mr. Saver has to catch before falling to the ground and we see an ice cube which is the extra point you should collect .We can see three hearts which decreases by falling of the rain water drop to the ground so we must avoid that to don't lose.

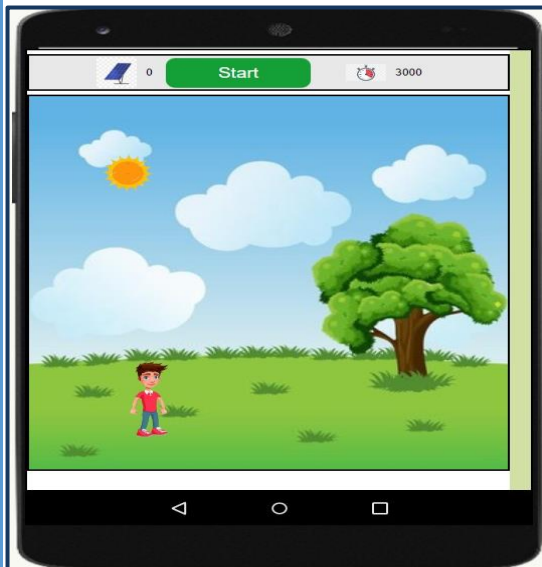
CH2:



- In CH2:

We can see four buckets of different colours that are full of water and a green grass land so we must put the buckets in the green grass land to water the land to grow up trees. Then, we can see parts of wind fans we must collect them to the old windmills on the top to repair them. Furthermore, we can see a hummer so we must press it to build the new windmill. So never find the hummer if you still don't collect the parts of the wind fan because your score will be 50 and it must be 100.

CH3:

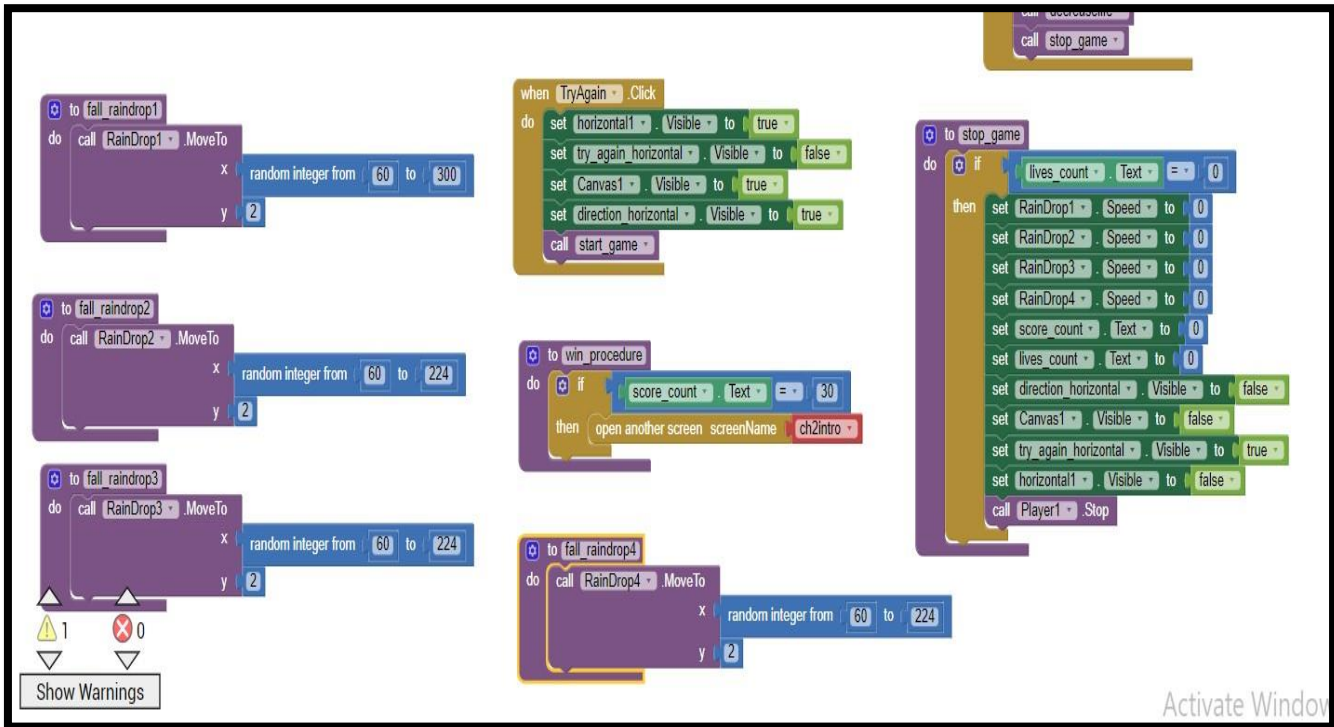


- In CH3:

We can see a garden which is full of grass and we are able to see the sun on the top so we must press the start button to play and a timer of 30 seconds so we must press on Mr. Saver to enables him to jump to get the solar power . we must get 20 solar energy before the time runs out.

Code :

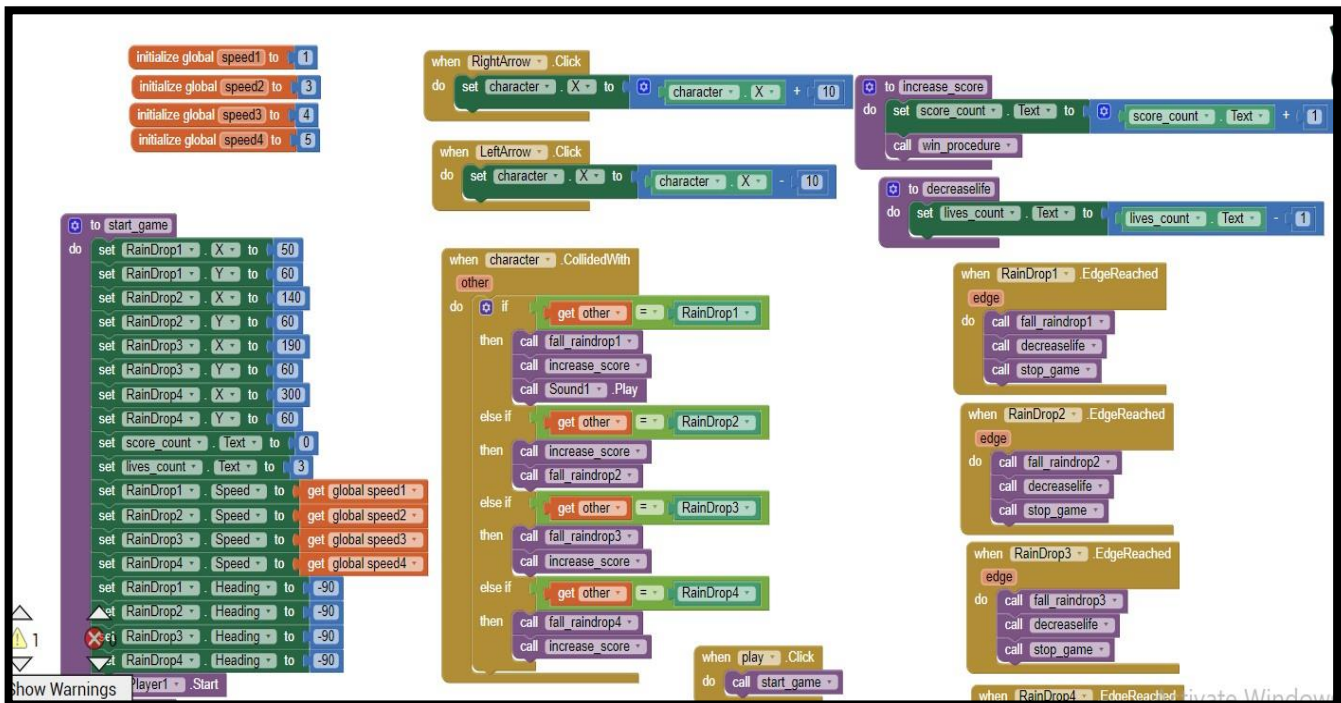
Challenge 1:



This block contains several Scratch code snippets for a game. The snippets are as follows:

- to fall_raindrop1**:
do
call RainDrop1.MoveTo
x random integer from 60 to 300
y 2
- to fall_raindrop2**:
do
call RainDrop2.MoveTo
x random integer from 60 to 224
y 2
- to fall_raindrop3**:
do
call RainDrop3.MoveTo
x random integer from 60 to 224
y 2
- when TryAgain Click**:
do
set horizontal1.Visible to true
set try_again_horizontal.Visible to false
set Canvas1.Visible to true
set direction_horizontal.Visible to true
call start_game
- to win_procedure**:
do
if score_count.Text = 30
then
open another screen screenName ch2intro
- to stop_game**:
do
if lives_count.Text = 0
then
set RainDrop1.Speed to 0
set RainDrop2.Speed to 0
set RainDrop3.Speed to 0
set RainDrop4.Speed to 0
set score_count.Text to 0
set lives_count.Text to 0
set direction_horizontal.Visible to false
set Canvas1.Visible to false
set try_again_horizontal.Visible to true
set horizontal1.Visible to false
call Player1.Stop
- to fall_raindrop4**:
do
call RainDrop4.MoveTo
x random integer from 60 to 224
y 2

At the bottom left, there is a 'Show Warnings' button and a status bar showing 1 warning and 0 errors.



This block contains several Scratch code snippets for a game. The snippets are as follows:

- initialize global speed1 to 1**
- initialize global speed2 to 3**
- initialize global speed3 to 4**
- initialize global speed4 to 5**
- when RightArrow Click**:
do
set character.X to character.X + 10
- when LeftArrow Click**:
do
set character.X to character.X - 10
- to Increase score**:
do
set score_count.Text to score_count.Text + 1
call win_procedure
- to decrease life**:
do
set lives_count.Text to lives_count.Text - 1
- to start_game**:
do
set RainDrop1.X to 50
set RainDrop1.Y to 60
set RainDrop2.X to 140
set RainDrop2.Y to 60
set RainDrop3.X to 190
set RainDrop3.Y to 60
set RainDrop4.X to 300
set RainDrop4.Y to 60
set score_count.Text to 0
set lives_count.Text to 3
set RainDrop1.Speed to get global speed1
set RainDrop2.Speed to get global speed2
set RainDrop3.Speed to get global speed3
set RainDrop4.Speed to get global speed4
set RainDrop1.Heading to -90
set RainDrop2.Heading to -90
set RainDrop3.Heading to -90
set RainDrop4.Heading to -90
- when character CollidedWith other**:
do
if get other = RainDrop1
then
call fall_raindrop1
call increase_score
call Sound1.Play
else if get other = RainDrop2
then
call increase_score
call fall_raindrop2
else if get other = RainDrop3
then
call fall_raindrop3
call increase_score
else if get other = RainDrop4
then
call fall_raindrop4
call increase_score
- when play Click**:
do
call start_game
- when RainDrop1 EdgeReached edge**:
do
call fall_raindrop1
call decrease life
call stop_game
- when RainDrop2 EdgeReached edge**:
do
call fall_raindrop2
call decrease life
call stop_game
- when RainDrop3 EdgeReached edge**:
do
call fall_raindrop3
call decrease life
call stop_game
- when RainDrop4 EdgeReached edge**:
do
call fall_raindrop4
call decrease life
call stop_game

At the bottom left, there is a 'Show Warnings' button and a status bar showing 1 warning and 0 errors.

Challenge 2:

```

when grass -> CollidedWith
  other
do
  if
    get other == brown bucket
  then
    set brown bucket -> Visible to false
    set score count -> Text to 0
    score count -> Text + 5
    call energy canvas -> DrawLine
    x1 0
    y1 10
    x2 0
    get global energy canvas + 50
    y2 10
    set brown bucket -> Visible to false
    set Fourth Tree 1 -> Visible to true
    call tree sound -> Play
  else if
    get other == green bucket
  then
    set green bucket -> Visible to false
    set score count -> Text to 0
    score count -> Text + 10
    call energy canvas -> DrawLine
    x1 0
    y1 10
    x2 0
    get global energy canvas + 100
    y2 10
    set green bucket -> Visible to false
    set First Tree -> Visible to true
    call tree sound -> Play
  else if
    get other == red bucket
  then
    set red bucket -> Visible to false
    set score count -> Text to 0
    score count -> Text + 15
    call energy canvas -> DrawLine
    x1 0
    y1 10
    x2 0
    get global energy canvas + 150
    y2 10
    set red bucket -> Visible to false
    set Second Tree 11 -> Visible to true
    call tree sound -> Play
  else if
    get other == blue bucket
  then
    set blue bucket -> Visible to false
    set score count -> Text to 0
    score count -> Text + 20
    call energy canvas -> DrawLine
    x1 0
    y1 10
    x2 0
    get global energy canvas + 200
    y2 10
    set blue bucket -> Visible to false
    set Third tree -> Visible to true
    call tree sound -> Play
  
```

```

initialize global energy canvas to 0
  
```

```

when green bucket -> Touched
  x y
do
  call green bucket -> MoveTo
  x saver -> X
  y saver -> Y
  
```

```

when saver -> Dragged
  startX startY prevX prevY currentX currentY
do
  call saver -> MoveTo
  x get currentX
  y get currentY
  
```

```

when blue bucket -> Touched
  x y
do
  call blue bucket -> MoveTo
  x saver -> X
  y saver -> Y
  
```

```

when red bucket -> Touched
  x y
do
  call red bucket -> MoveTo
  x saver -> X
  y saver -> Y
  
```

```

when brown bucket -> Touched
  x y
do
  call brown bucket -> MoveTo
  x saver -> X
  y saver -> Y
  
```

```

to win
do
  if
    score count -> Text == 100
  then
    open another screen screenName chaoIntro
  
```

```

when hummer -> Touched
  x y
do
  set windmill -> Visible to true
  
```

```

when Screen1 -> Initialize
do
  call Player1 -> Start
  
```

```

when fan4 -> Touched
  x y
do
  set fan4 -> X to saver -> X
  set fan4 -> Y to saver -> Y
  
```

```

when fan2 -> Touched
  x y
do
  set fan2 -> X to saver -> X
  set fan2 -> Y to saver -> Y
  
```

```

when fan1 -> Touched
  x y
do
  set fan1 -> X to saver -> X
  set fan1 -> Y to saver -> Y
  
```

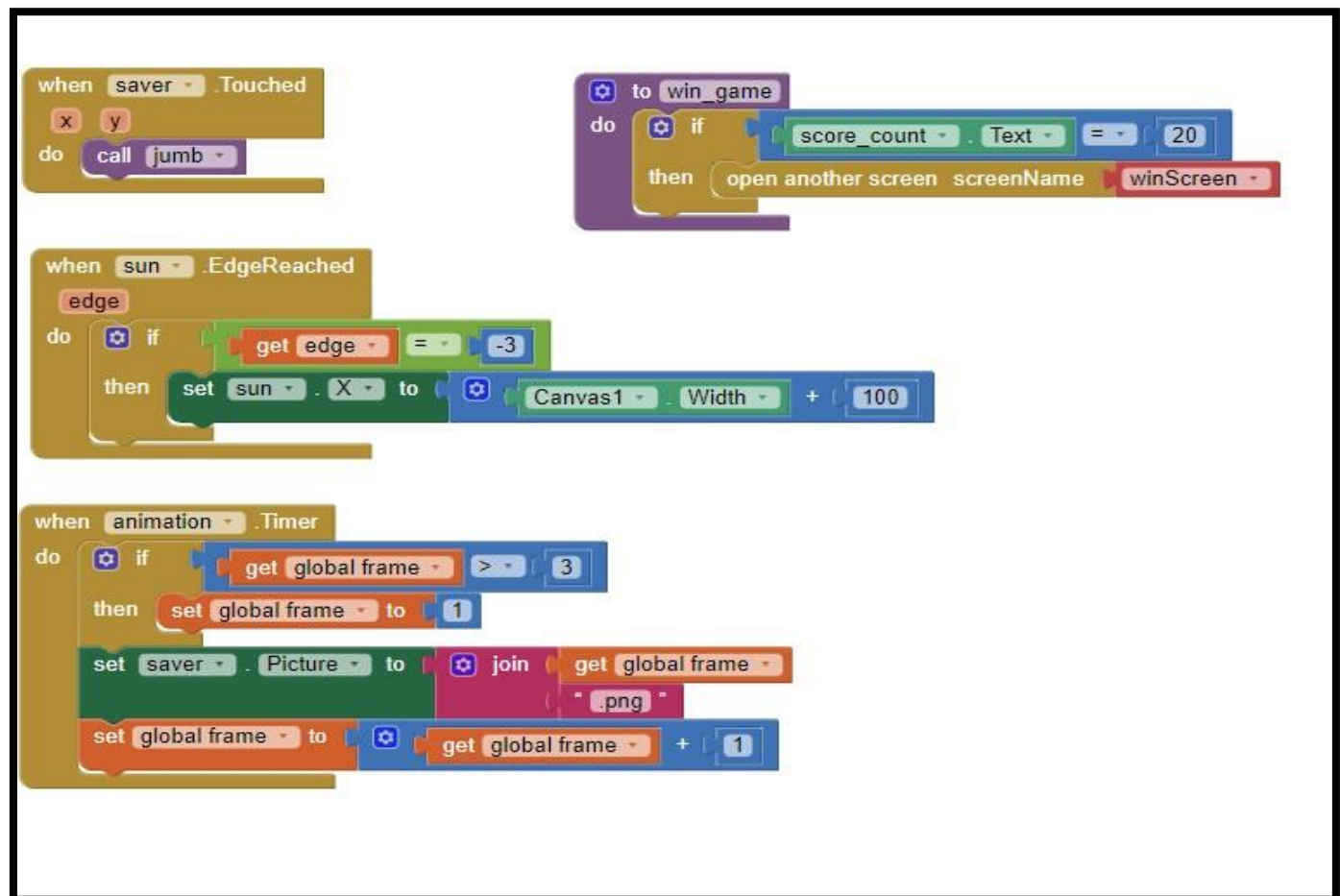
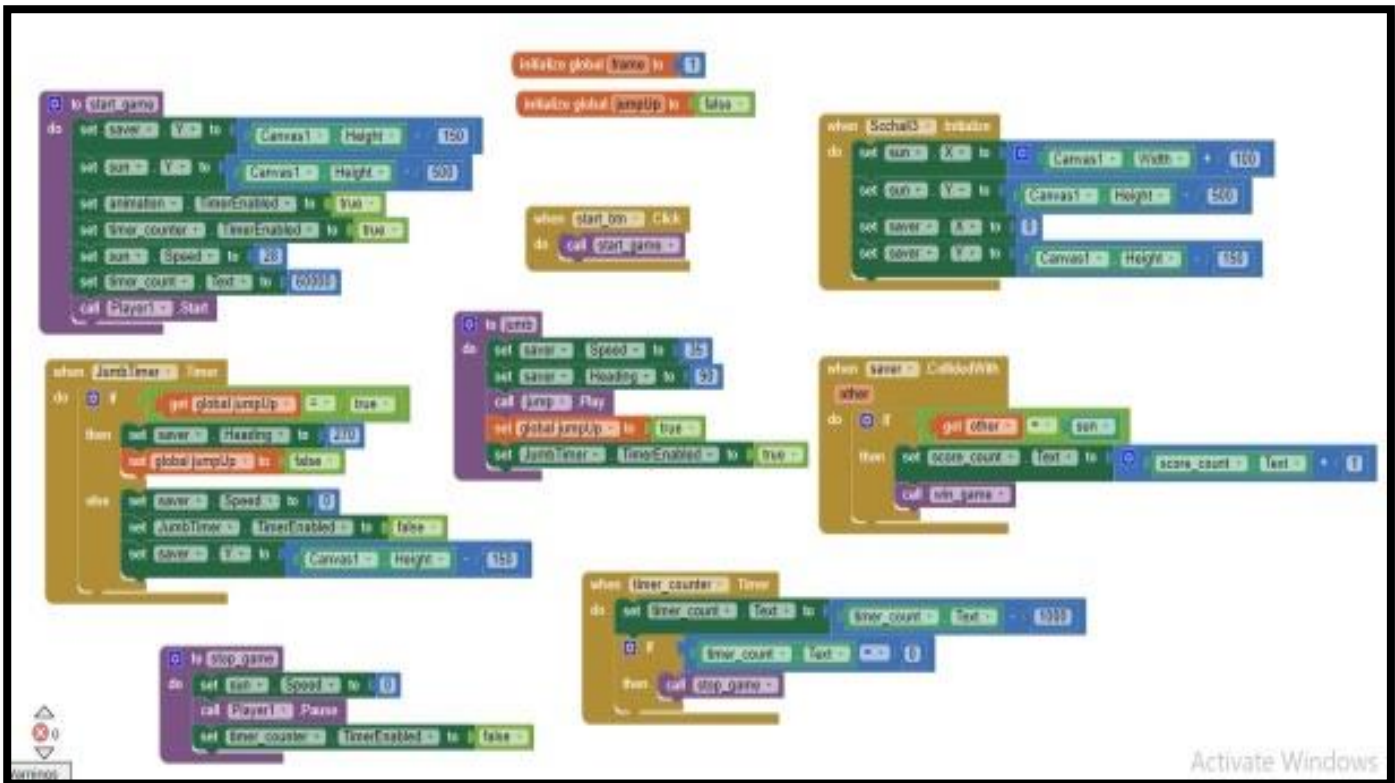
```

when fan3 -> Touched
  x y
do
  set fan3 -> X to saver -> X
  set fan3 -> Y to saver -> Y
  
```

```

when broken -> CollidedWith
  other
do
  if
    get other == fan1
  then
    set score count -> Text to 0
    score count -> Text + 10
    set fan1 -> Visible to false
    call energy canvas -> DrawLine
    x1 0
    y1 10
    x2 0
    get global energy canvas + 200
    y2 10
    call win
  else if
    get other == fan2
  then
    set score count -> Text to 0
    score count -> Text + 15
    set fan2 -> Visible to false
    call energy canvas -> DrawLine
    x1 0
    y1 10
    x2 0
    get global energy canvas + 300
    y2 10
    call win
  else if
    get other == fan3
  then
    set score count -> Text to 0
    score count -> Text + 15
    set fan3 -> Visible to false
    call energy canvas -> DrawLine
    x1 0
    y1 10
    x2 0
    get global energy canvas + 350
    y2 10
    call win
  else if
    get other == fan4
  then
    set score count -> Text to 0
    score count -> Text + 10
    set fan4 -> Visible to false
    call energy canvas -> DrawLine
    x1 0
    y1 10
    x2 0
    get global energy canvas + 400
    y2 10
    call win
  
```

Challenge 3:



Marketing Plan

- **Facebook page**

We create a Facebook page which is called (Mr. Saver game) to share our game idea there.

Our Link:-

<https://www.facebook.com/profile.php?id=61556771392308&mibextid=ZbWKwL>

- **Sponsored ads**

We lunch ads to make people know about game.

- **Payment**

Our game is for free to make a lot of people install, Play and learn from the game.

- **Open day**

We will organize open day to give information about the game and let people try our game with us, having a lot of fun and knowing their feedbacks.