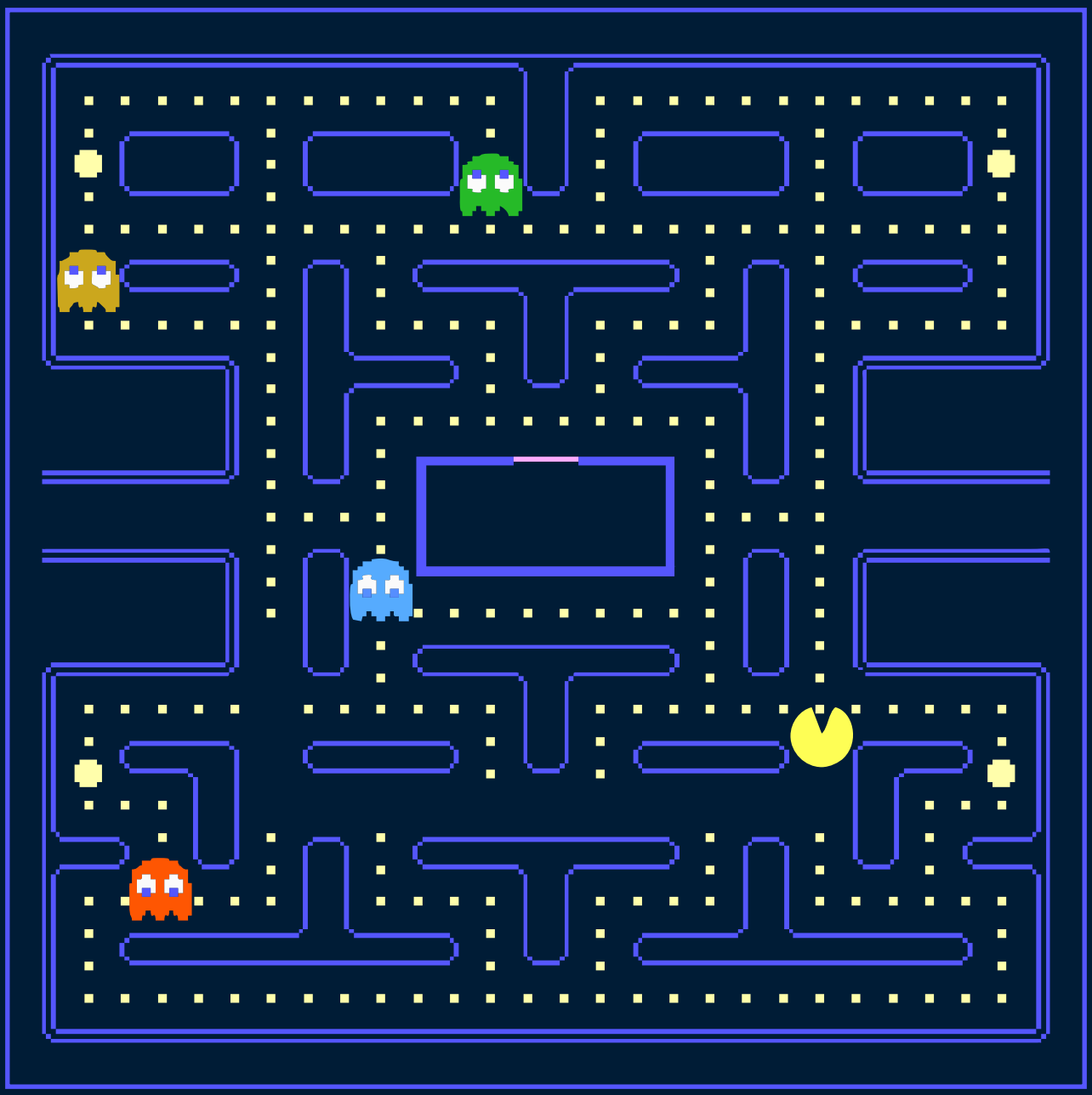
98 TH PERCENTILE
GIFTED THROUGH HARDWORK

PACMAN

Is your kid a Consumer or a Creator of Video Games?

Develop a Pacman Game with 98thPercentile



Intended Learning from Pacman ebook

In this ebook students will get introduction to scratch and its working, along with that it has step by step directions to create Pacman game.

Acquired skills from ebook

Back End Knowledge of Game Design	Students learn the back end working and designing of the game which makes them “Creators of games” instead of “Consumer of the game”.
Sequential Statement	Students learn how to put all the code in a logical and how sequence of a code affects the overall working of code
Conditional Statement	Students learn how to use conditional Statements extensively and put code accordingly in it
Color Combination	Students learn color combination skills through, creating the sprites and editing their own version of it, they learn how some color suits well with few other colors.

Introduction to Scratch and Pacman

- We will be creating the game Pacman.
  To check it out, follow the given link

  https://bit.ly/2NmxJ6n

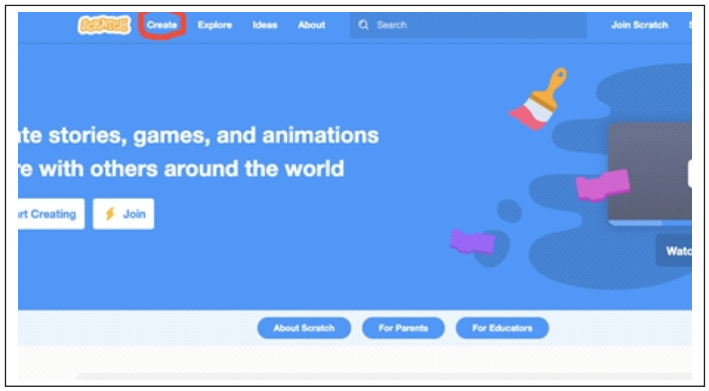
- To download the required sprites.
  Kindly click on this link.

  https://bit.ly/2FMZKQn

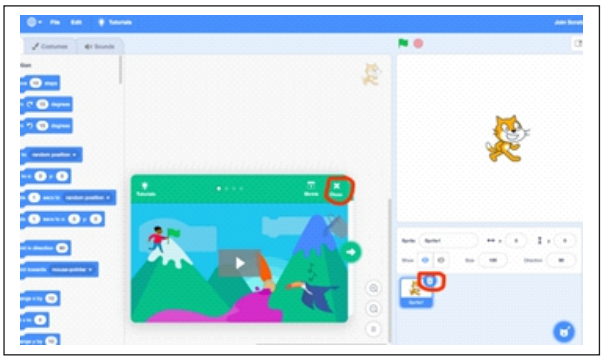
- We will be creating the game on Scratch.
  Go to

  https://scratch.mit.edu/.

- Kindly click on Create button on top right corner.
  "Create" button will open the window for for creating the game module.

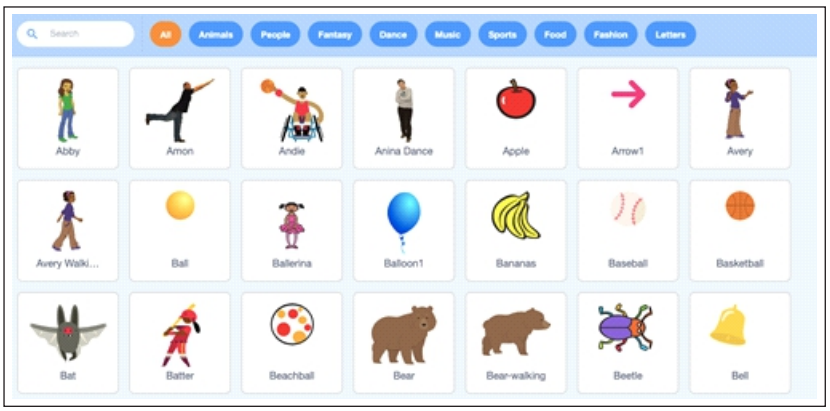


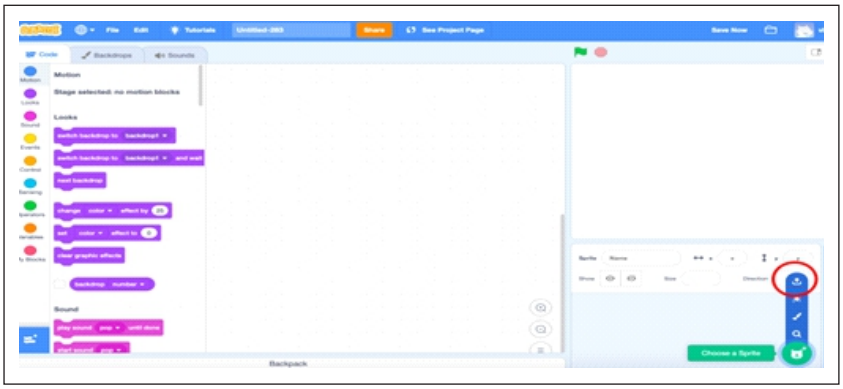
- Delete the existing default Cat sprite.



- You can use downloaded sprite and backdrop and upload it in the game.

(Upload button). We can create the sprites as well, along with uploading it on the Scratch. There are lot of Different Sprites which are already present in it.



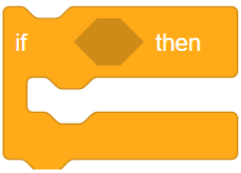


- Provide the required code in the corresponding sprite, explanation of code is along with the code.

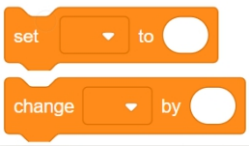
Introduction of Major Code Blocks in Scratch is given to help you.

This will start our game running. when the green flag is clicked all connected blocks will be run in order

This creates a loop. Code inside is run over and over until the game is quit

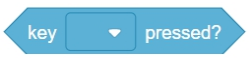


This is an if block. It checks whether something is true and if so, the code inside it is run

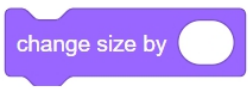


These blocks allow us to change the value of a variable with the name deaths

This block goes inside an if block and allows us to check if the player has touched an enemy



This block goes inside an if block and allows us to check whether a key has been pressed



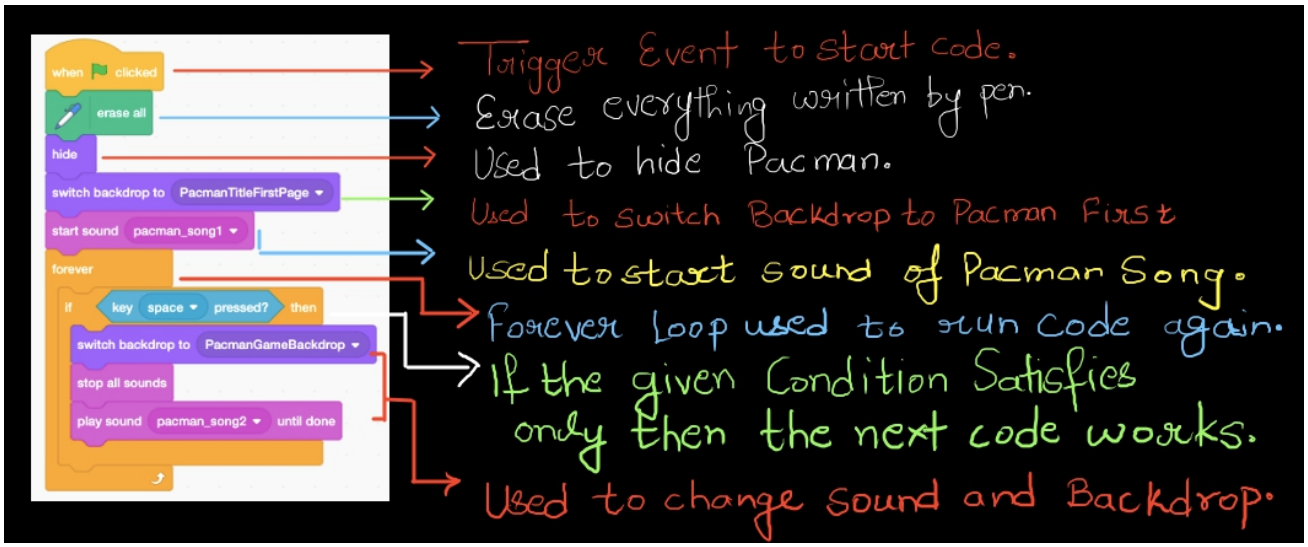
This block allows us to move our character right or left

Code for Pacman

The goal for writing successful code in Scratch is that, we should put the code in the sprite for which we want the action to happen. For example, If we want Pacman to move in right direction we should put the code in the Pacman Sprite.

Block - 1

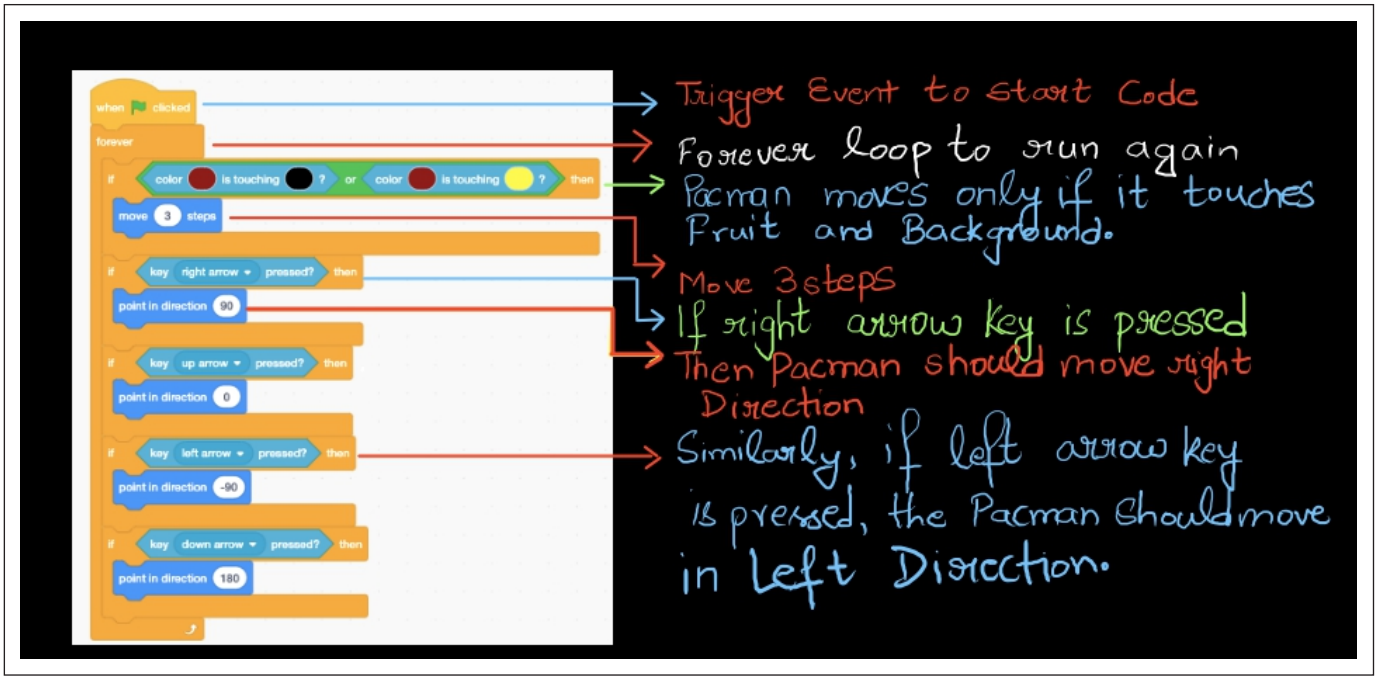
Summary of Code Block



This particular code block deals with the change of Backdrop of the game. We have an introductory backdrop which we call as “PacmanTitleFirstPage”, we want this page whenever the game starts and when the user press “space” key it should change to “PacmanGameBackdrop”. Along with that we also want to make sure that “erase all” block should erase all the stuff written by the previous user moreover this code block also changes the sound according to the requirement.

Block - 2

Summary of Code Block

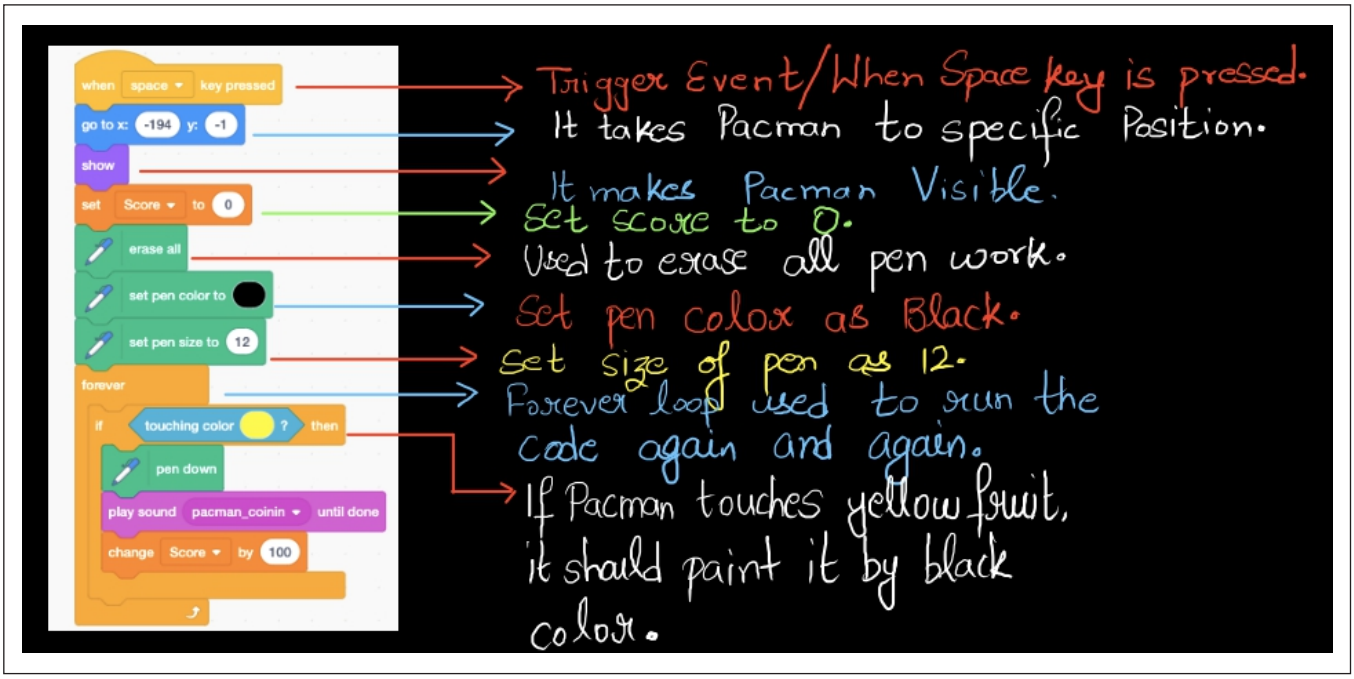


This particular code block provides Movement code for Pacman, we are moving Pacman constantly in this game, along with that we are also providing appropriate directions to Pacman whenever corresponding key from keyboard is pressed. The most important attribute of the code is the condition that Pacman should only move when the dot color in front of Pacman is touching either the background color or color of fruit.

This ensures that when Pacman faces the wall/maze of game it stops.
(It is suggested to use color picker to fill in the correct color).

Block - 3

Summary of Code Block



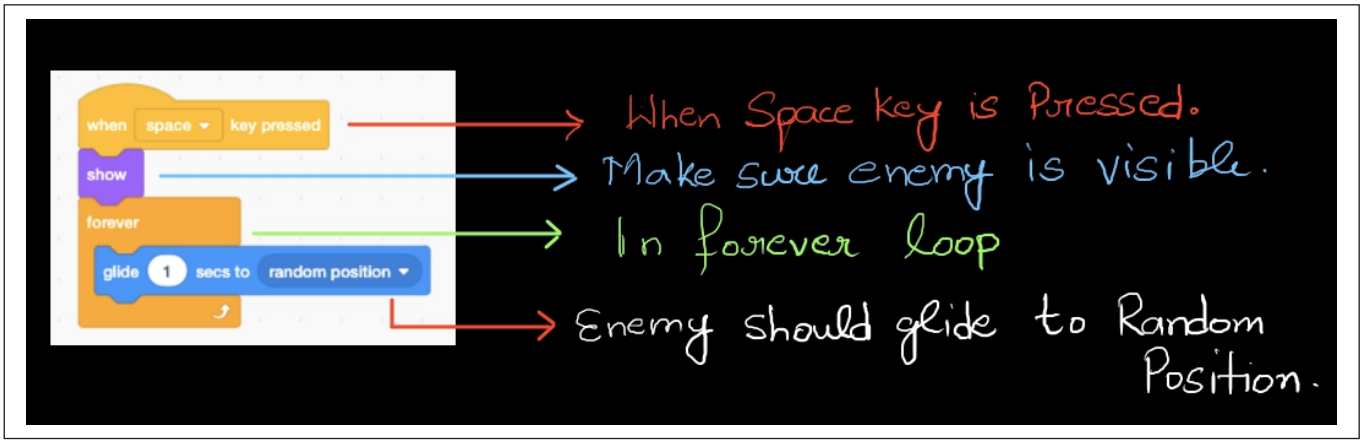
This code block ensures, the initial required setting for Pacman, for example the starting location of Pacman, its visibility, ability of pen, initializing the "score" variable as 0. Along with that it also makes sure, that when Pacman touches yellow fruit then it draws "Black" color on top of that, giving us an illusion along with sound that actually fruit is eaten by Pacman.

Code Block in Enemy Sprites

After entering every block, keep checking its working,
to make sure its working correctly.

Block - 1

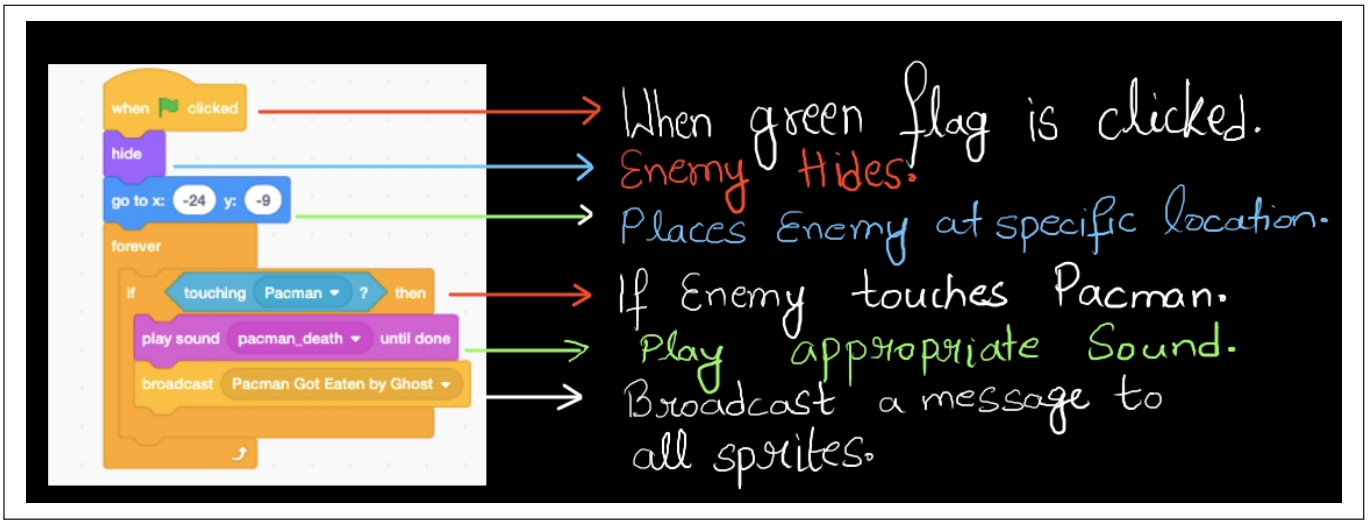
Summary of Code Block



This code ensures that when “Space” key is pressed, make sure Enemy is visible, using “show” code block. Along with that “Enemy” is moving randomly, in the maze. Make sure that you put the same code in all the enemy sprites.

Block - 2

Summary of Code Block



We put this code in enemy which ensures, that enemy starts from a specific location in the maze and hides, if enemy touches pacman, play sound that enemy dies and also broadcast the message that pacman is eaten. When Pacman receive the message it changes its color and stop all the sprites.

Congratulations!!!

You have become a creator of Pacman Game!!

Don't forget to check out our program at :-
https://www.98thpercentile.com/