

# University of Mianwali(UMW)

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## Lab Manual Introduction to Information & Communication Technologies

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Class-Section	
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# Week-05

## Objectives

After performing this lab, students shall be able to:

- Get familiar with the scratch environment
- Implement basic sequencing, branching and iterations in scratch
- able to Develop new logics and scenarios by making games

## Task List

### Task-1 Making a Car Race Game

Create a word report for this manual.

Open Website: <http://scratch.mit.edu/>

#### Problem #1-Name Animation

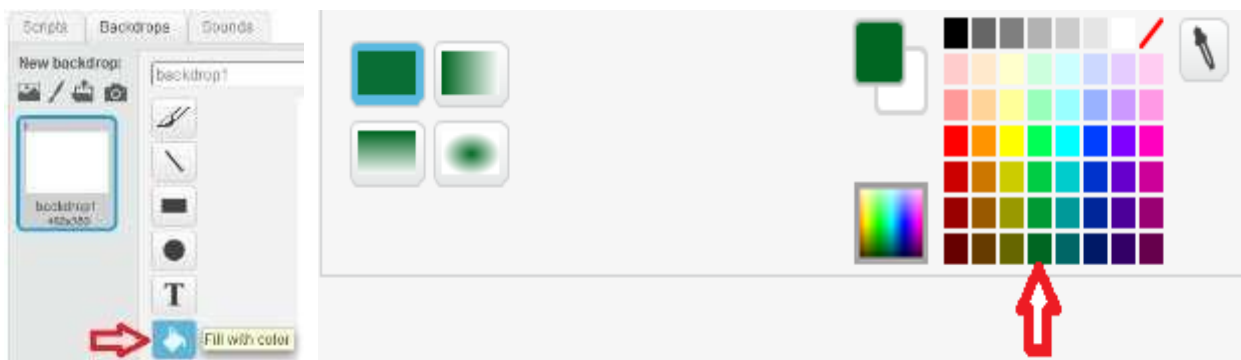
Create a simple Car Game which is running on a specified path and if it touches the edge it will stop or get crashed and say you win if it cross the finish line

#### Steps

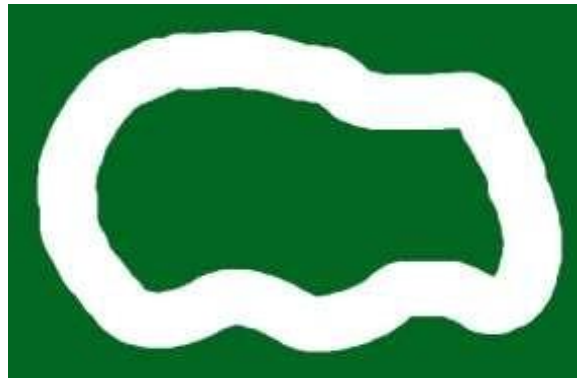
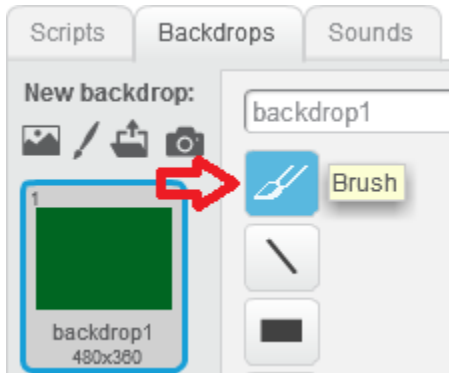
1. We do not need the default sprite so go ahead delete the sprite
2. We need to create a backdrop for a race game so click on Backdrops



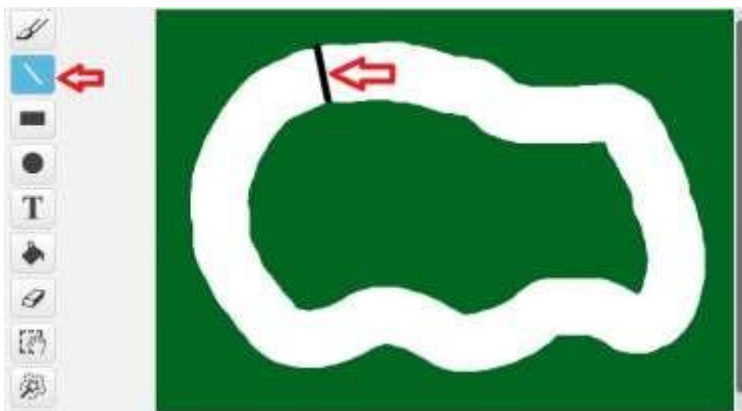
3. Select Fill with Color button to change the background color let say it's green, change the color to green



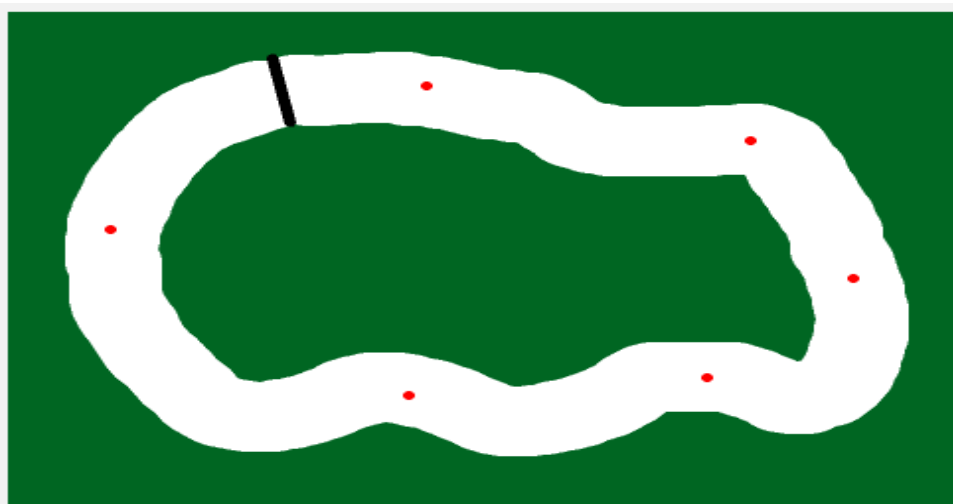
4. The select a Brush for your actual track select the color white and make the following track. Please make sure that you select the brush width enough wide that your created track may look like the following.



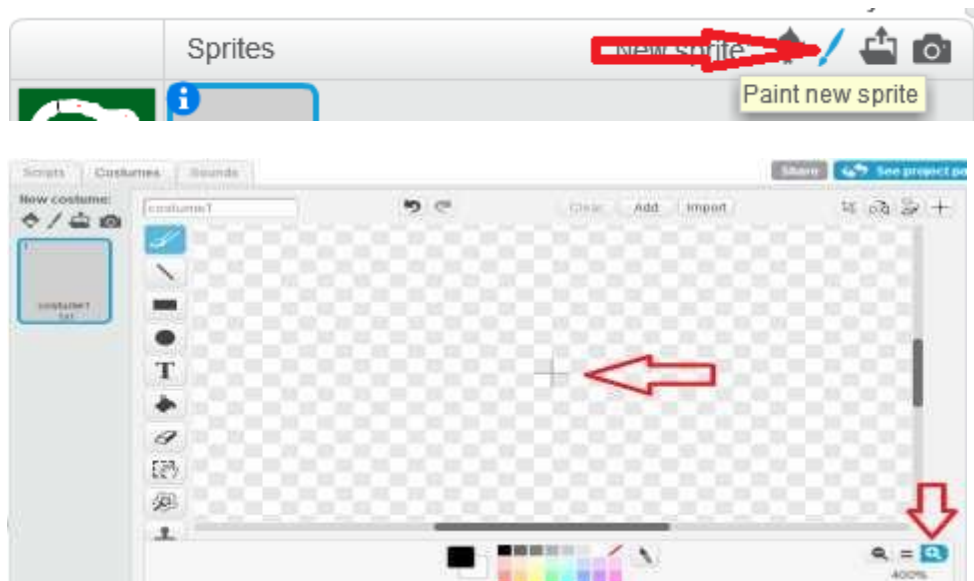
5. Make a finish line by selecting Line tool



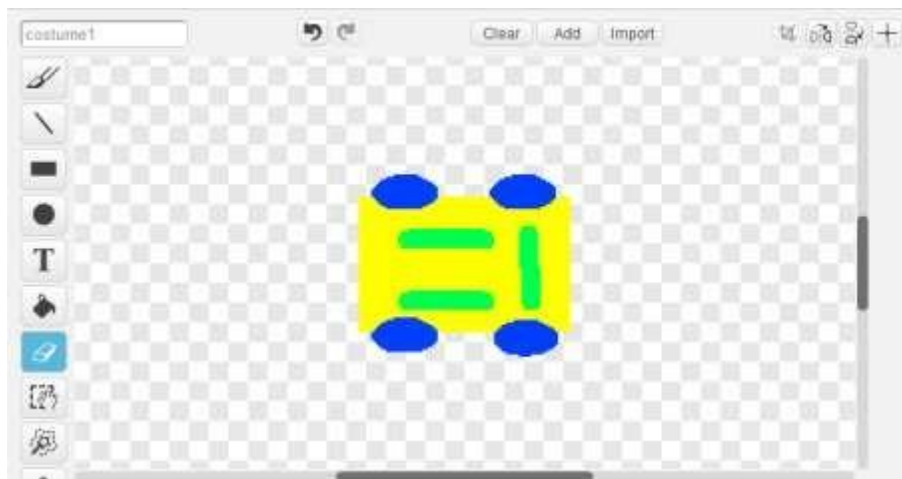
6. You can also make some power ups or boost to the game by adding some dots. So that when even your car hit any red dot speed increases.



7. So now our track is ready. So the next step is to create a new car. For that click on new sprite and make sure that you zoomed in so that you can see a little cross on the screen actually this is the center of your sprite



8. The purpose of finding out the center of sprite is because when you create a car you will make sure that it will be created in the center. Create your care like in the following pictures but you can make your car much better than this it's up to your designing skills



9. Create another car by right clicking and duplicating the costume and turn your costume into a crashed car



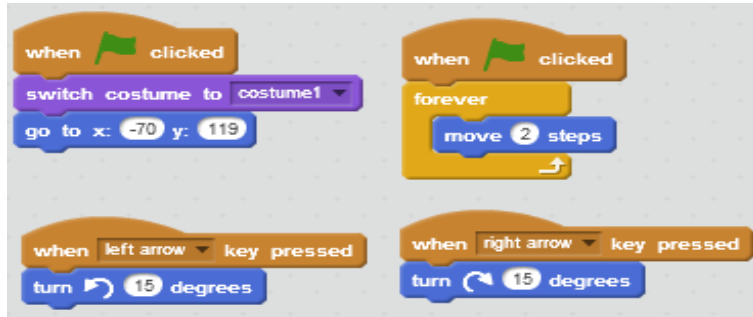
10. Drag your car to the starting position and note the x-axis and y-axis values and put the values when press the flag button and make sure you use the right costume when you press the flag button



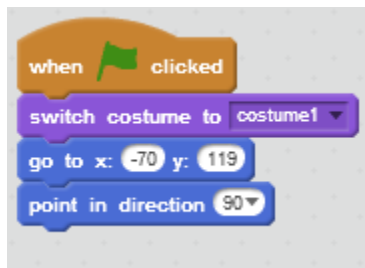
11. So we add another when the flag click event and start moving the car forever. Here I have shown you the both code blocks so that your concept become clear and these both events are in the same page. Now click the flag button and see whether the car moves or not.



12. So far so good. We have not put the code when car hit the green color what should we do well we will handle this later. Now we are going to create 2 more events when right arrow key pressed and when the left arrow key pressed for giving the direction in other mean controlling the car movement. Mean when the left key pressed turn left and when the right key presses turn right



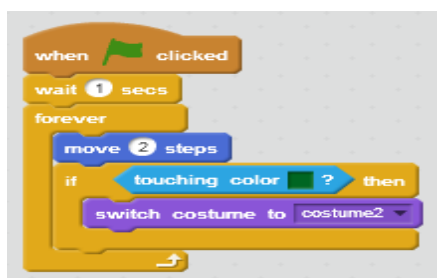
13. As you can see that now your car can turn. Now we need to show the car in its original position so that when we press flag button it start the right way



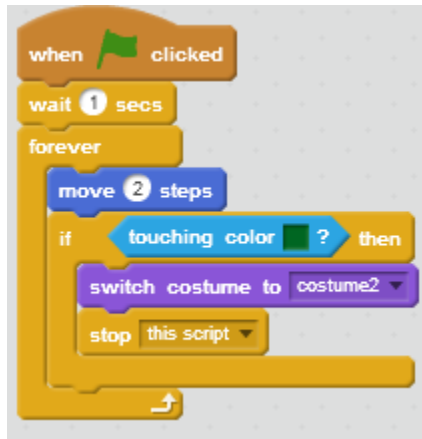
14. You can also add a wait block which will easier for us to turn our car.



15. Now we need to sense the color if it is green then we change the costume to crashed car costume.



16. Now your car will switch to crashed car costume when it hit the green color in other way when it will out of track but you will see that your switch to the costume2 but still moving for stopping we need to stop this script.



17. Now your game is in the working condition and you can play. Now we add some power ups or boosters just to make it interesting. Like when I hit the red color car speed will increase.



18. Now we need to work on our finish line code it's also very simple need one more if condition and this thing I left for you to code. When your car hit the finish line it says you win.

