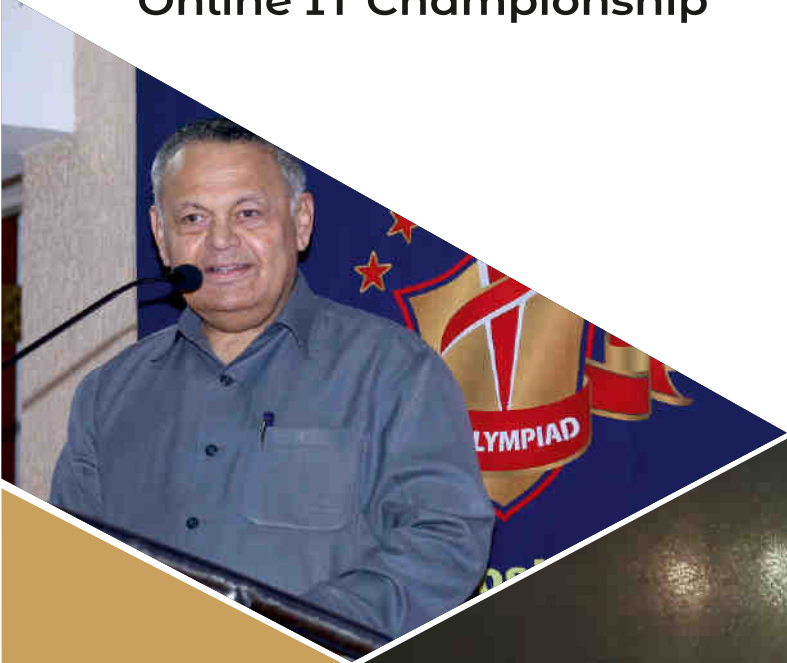


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# CodePad

Codepad is an online compiler/interpreter, and a simple collaboration tool. Paste your code below, and codepad will run it and give you a short URL you can use to share it in chat or email.

To open codepad search on search engine.

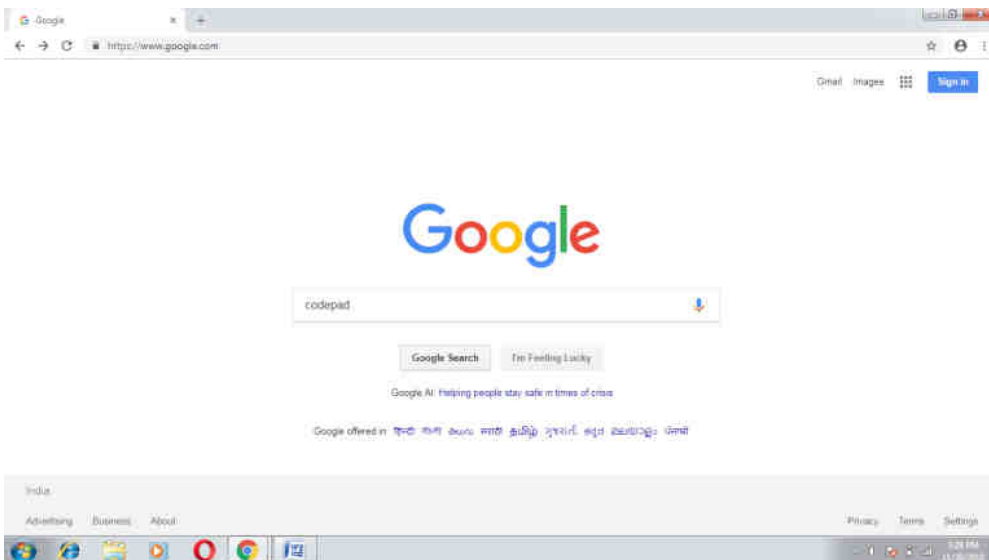
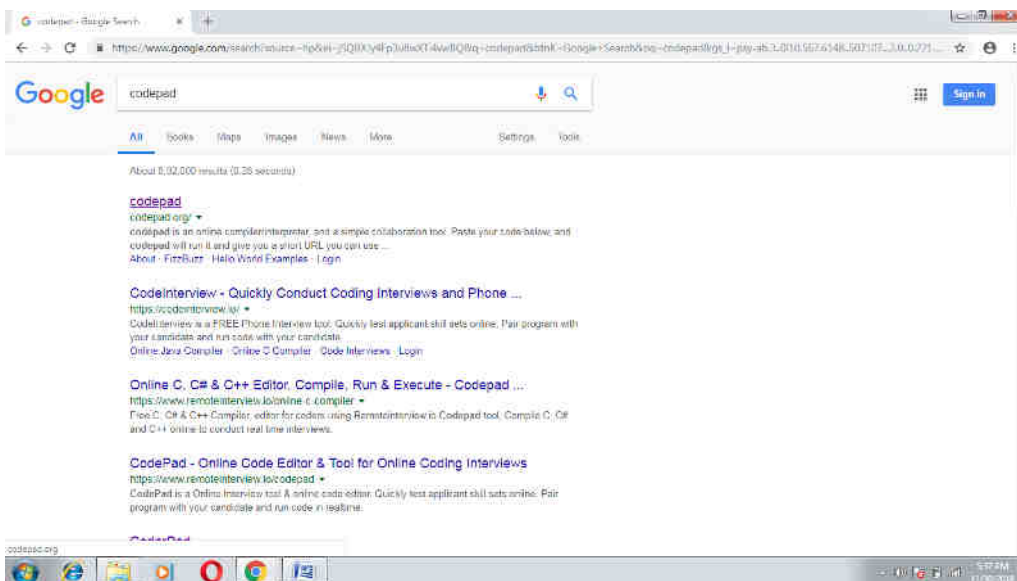


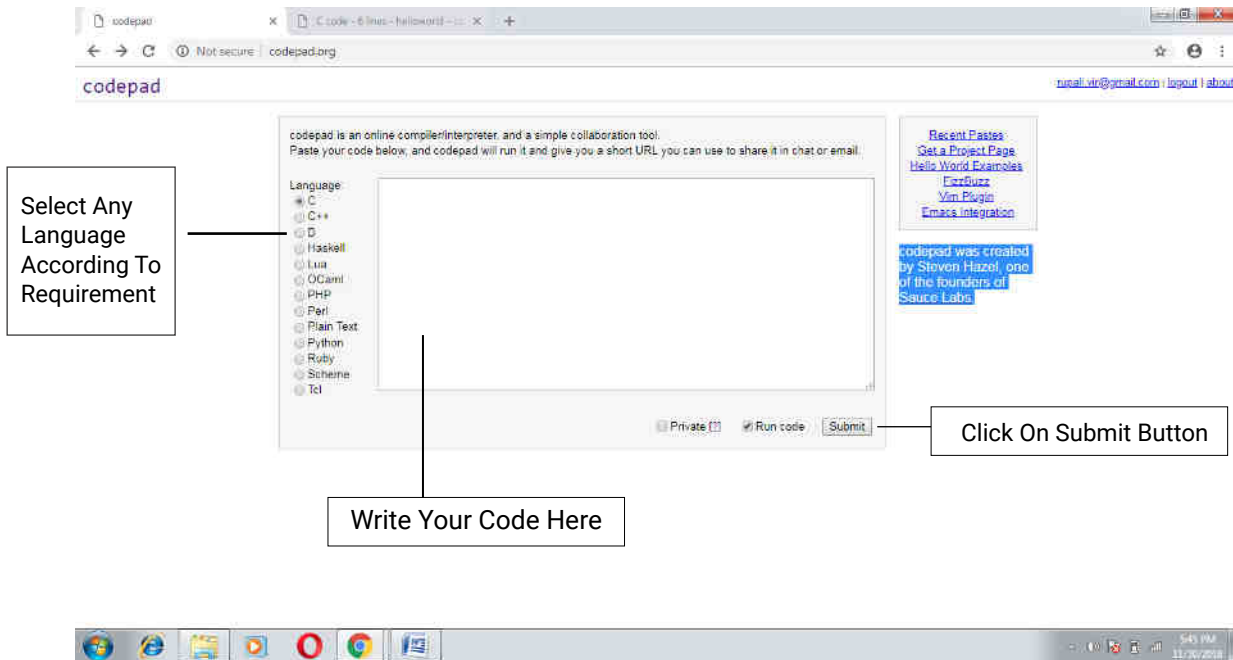
Figure 1.

You will get Codepad.org link. Click on that link and you will get online IDE of codepad.

Where we can type our code and execute. It provides you to choose required language.



Codepad was created by Steven Hazel, one of the founders of Sauce Labs.



You can get different language options as shown above in picture. We can select any of given language by clicking on radio button. Then write your code and click on submit button then it will create a paste with link and output.

There are two options we get to create paste.

### 1. Private

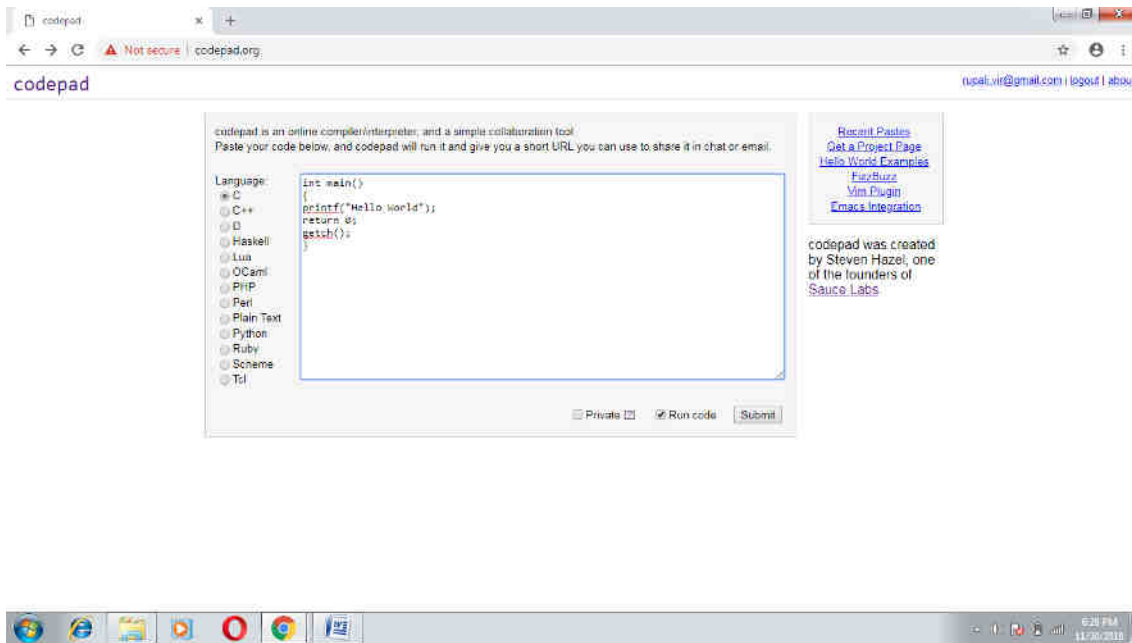
Pastes on codepad.org are public by default. This means that they are linked to "Recent Pastes" section, and from the other pages on codepad.org, and that they may be discovered by search engines.

If you mark a paste "private", it will not be publicly linked on codepad.org, and will contain a no index tag to advise search engines not to index it. This is a basic, minimally effective way of keeping pastes private. Only users to whom you send the URL will be able to find your private pastes.

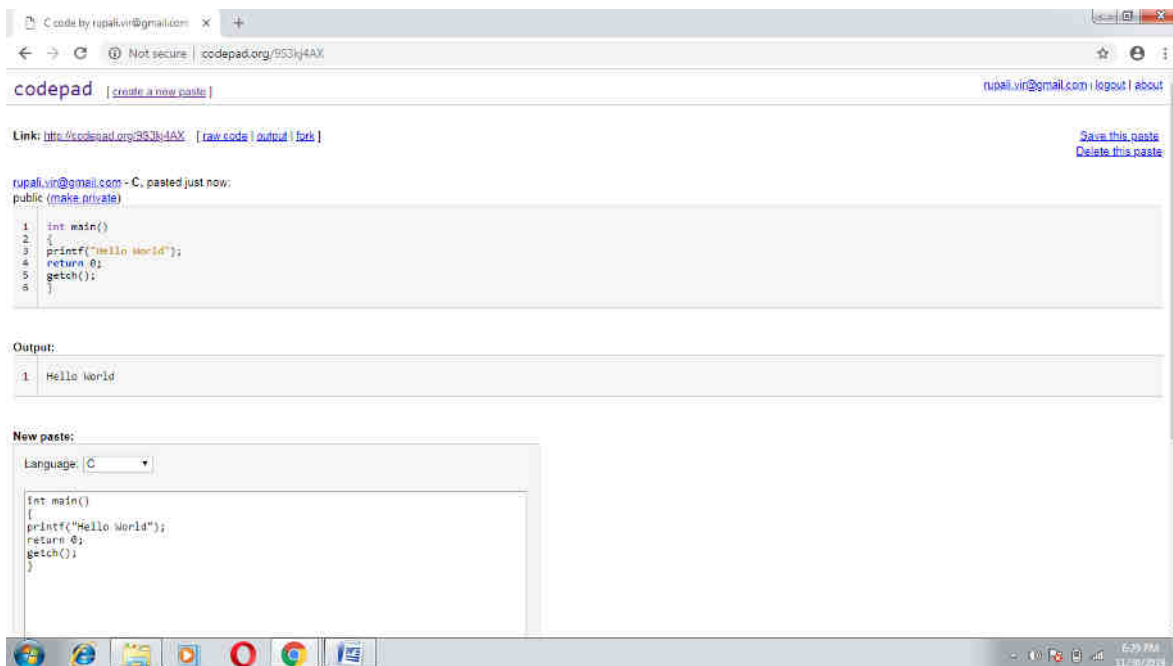
## 2. Run code

When we select run code Pastes are public.

### Codepad Example Program using C



Output paste:



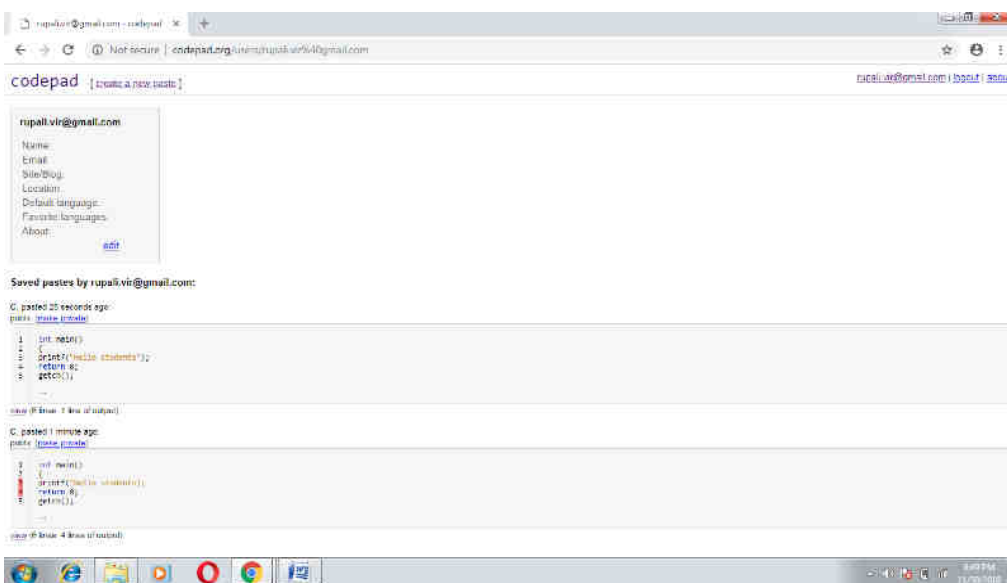
## Explanation of options we get on output screen

**Raw code:**This option allows saving your code on hard drive of your pc.

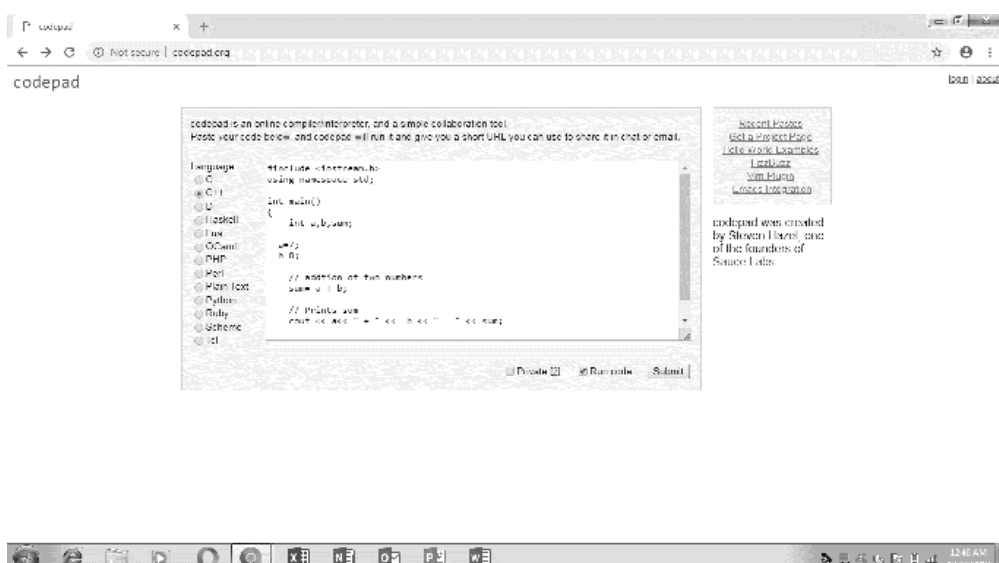
**Link:** We can copy this link and share it to others using chat or mail.

**Delete Pastes:**We are able to delete created pastes using this option.

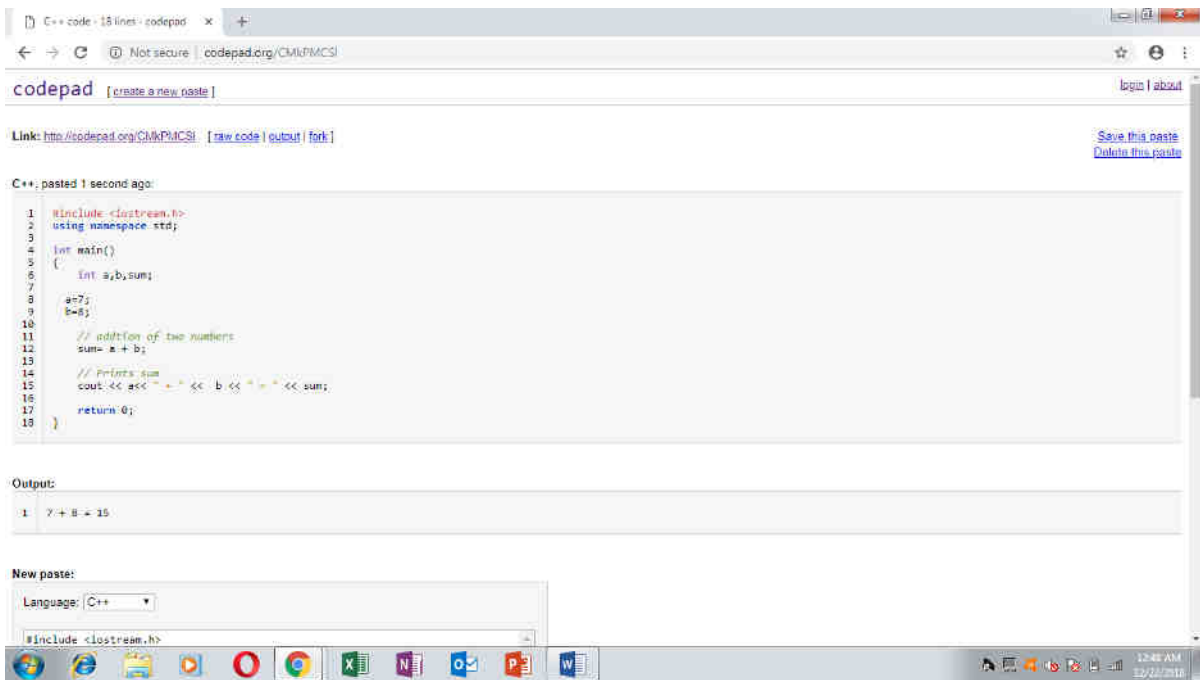
**Save this paste:**We can save the paste on our mail account



## Codepad Example program using C++



## Output paste



The screenshot shows a web browser window with the URL `codepad.org/CMkPMCSl`. The page title is "codepad" and it includes a "create a new paste" link. Below the header, there are links for "Link: http://codepad.org/CMkPMCSl", "raw code", "output", and "fork". On the right side, there are links for "Save this paste" and "Delete this paste". The main content area shows a C++ code snippet pasted 1 second ago. The code is as follows:

```
1 #include <iostream.h>
2 using namespace std;
3
4 int main()
5 {
6     int a,b,sum;
7     a=7;
8     b=8;
9
10    // addition of two numbers
11    sum= a + b;
12
13    // Prints sum
14    cout << a << " + " << b << " = " << sum;
15
16    return 0;
17 }
18
```

Below the code, the "Output:" section displays the result of the program execution:

```
1 7 + 8 = 15
```

At the bottom, there is a "New paste:" section with a language dropdown menu set to "C++" and a text input field containing the code `#include <iostream.h>`. The browser's taskbar at the bottom shows various application icons and the system clock indicating 12:48 AM on 10/22/2018.

## Do it yourself

Write a program to check given number is even or odd by using any language you know.

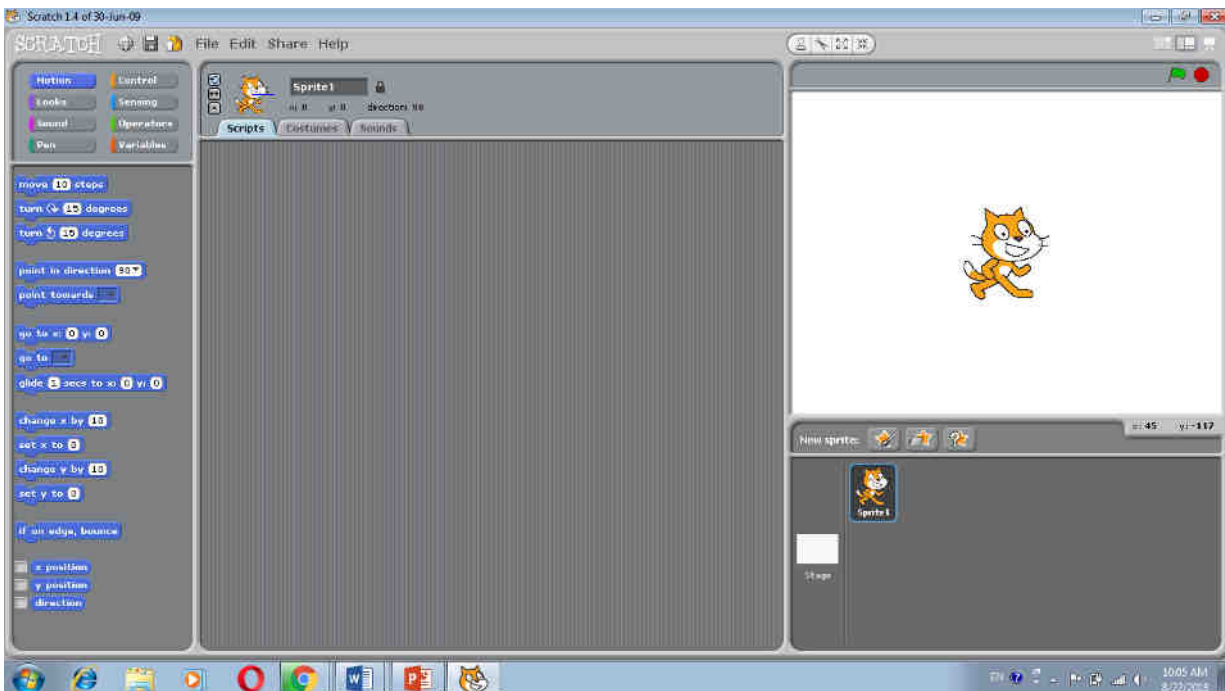
# Scratch Programming

## Introduction to Scratch

Scratch is a graphical programming language, developed by the Lifelong Kindergarten group at the Massachusetts Institute of Technology.

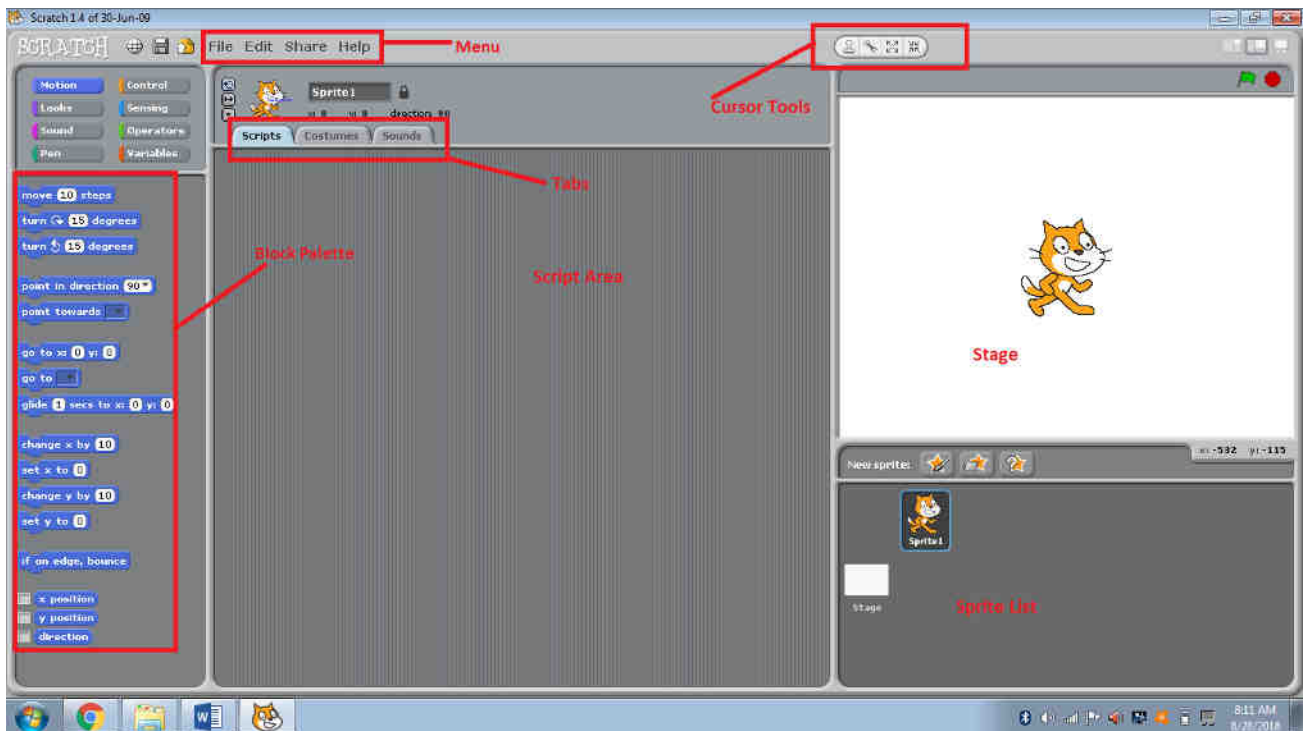
Children can drag and combine code blocks to make a range of programs, including animations, stories, musical instruments and games. It's a bit like the programming equivalent of Lego!

To Open Scratch, double-click on the Scratch (cat) icon or click on Scratch.exe





# Introduction to IDE of Scratch



**The Stage** - The stage is where your sprites move, draw, and interact. The stage is 480 steps wide and 360 steps tall.

**Sprite List** - The sprite list displays names and thumbnails for all the sprites in your project. New projects begin with a white stage and a single cat-costumed sprite.

**Blocks** - In scratch are divided into different categories (palettes): like motion, looks, sound, pen, control, sensing, and operators.

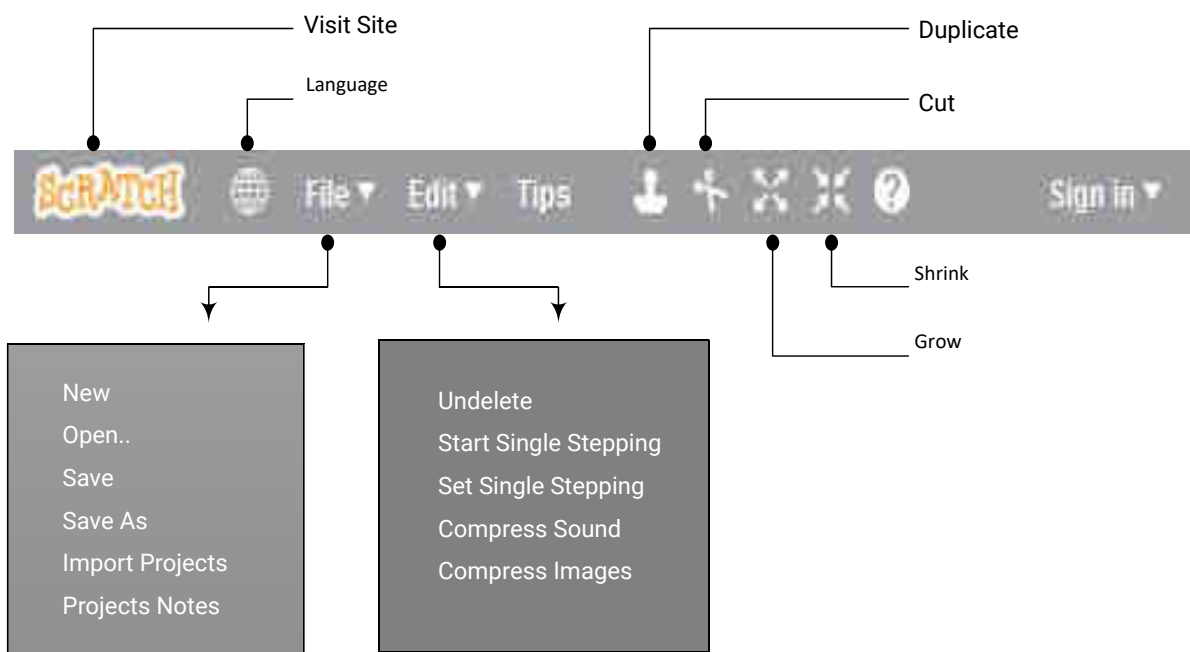
**Scripts Area** - To make a sprite do interesting things, you need to program it by dragging blocks from the blocks tab to the scripts area and snapping them together. When you drag a block around the scripts area, a white highlight indicates where you can drop that block to form a valid connection with another block.

**Costumes Tab** - You can change what a sprite looks like by changing its costume, which is just an image. The costumes tab contains everything you need to organize your sprite's costumes. You could think of it like a clothes closet. The closet can have many costumes, but a sprite can wear only one at a time.

**Sounds Tab** - Sprites can also play sounds, which liven up your programs. You can, for example, give a sprite different sounds to use when it's happy or sad. If your game contains a sprite that looks like a missile, you could make the missile generate different sounds when it hits or misses a target.

## Menu Bar

On Menu Bar you will get Menus like File, Edit, Share, and Help

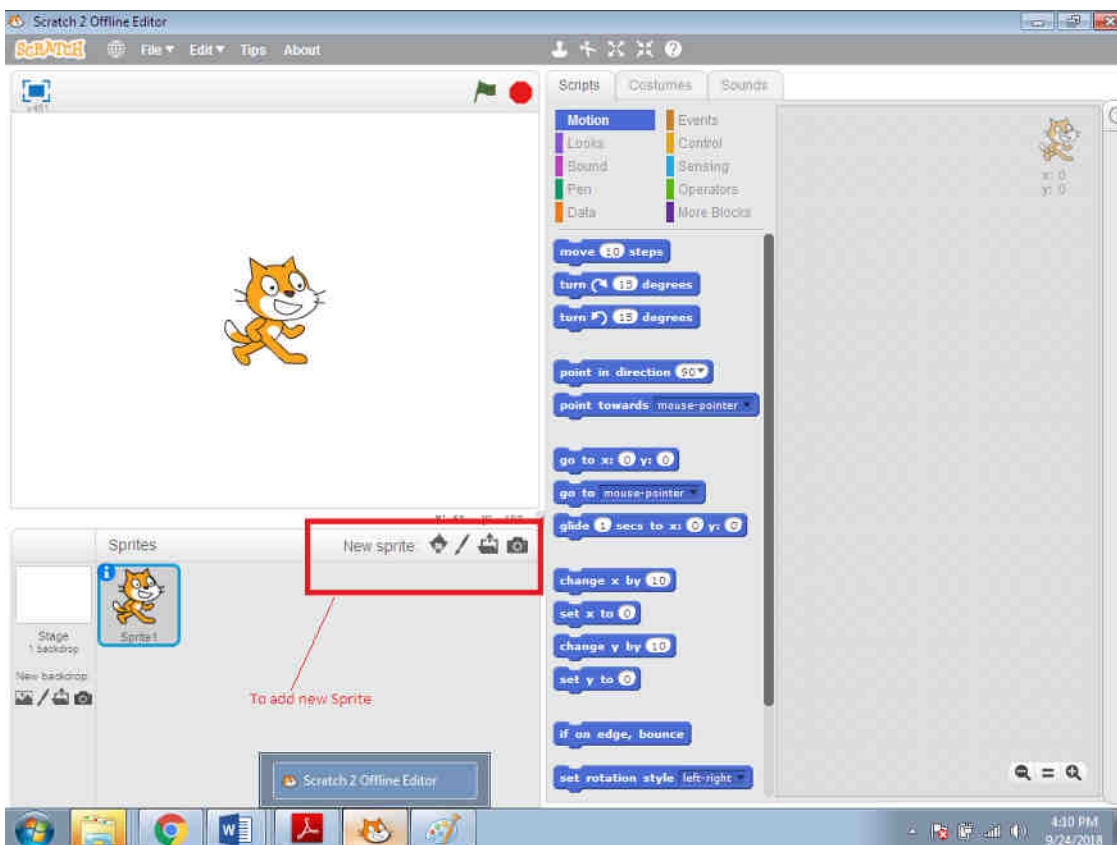


From the **file menu**, you can create new projects, upload (open) an existing project from your computer, download (save) the current project to your computer, or revert (undo) all your changes to the current project. You can import projects, export sprites, write summary, notes. Also you will be able to write multiple projects summary.

In the **edit menu**, undelete will bring back the last block, script, sprite, costume, or sound you deleted. The small stage layout option shrinks the stage and gives the scripts area more room.

### What Is Sprite?

Each object in scratch is called a sprite.



The cat that you see in figure 1-1 is called a sprite. Sprites understand and obey sets of instructions that you give them.

You can add new sprite, choose from the library, paint your own sprite, upload your own image or sprite take a picture (from a webcam).

Tip –

Object – a material thing that can be seen and touched. In Programming language objects are the things you think about first in designing a program and they are also the units of code that are eventually derived from the process

## Costumes Tab

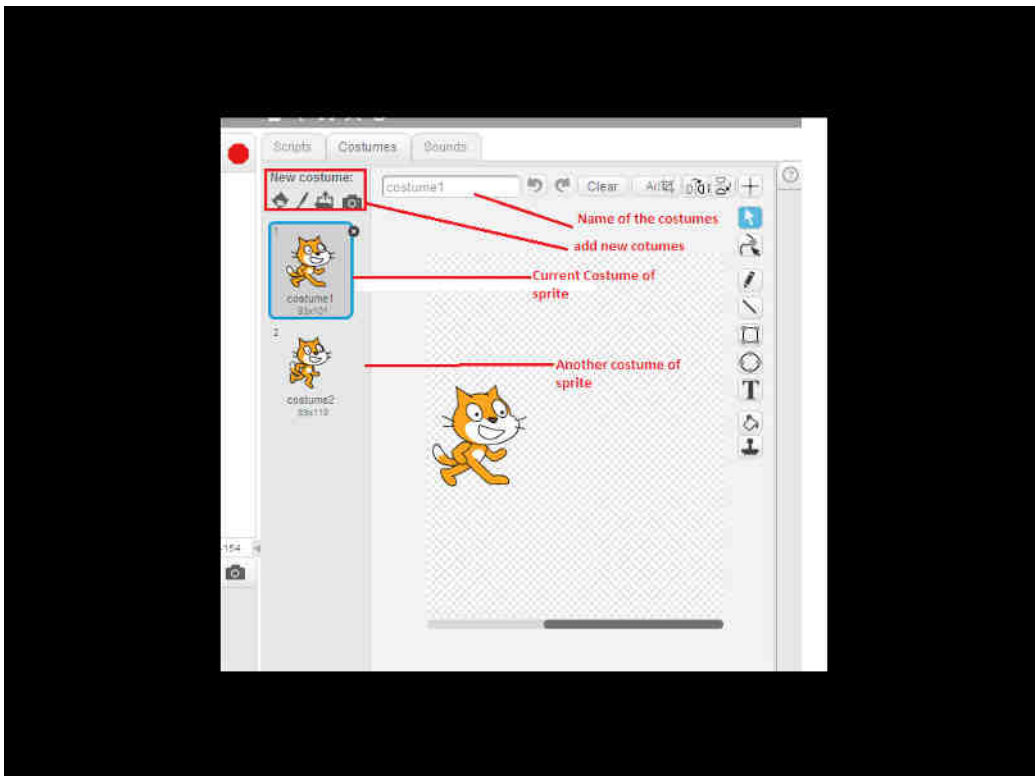
You can change what a sprite looks like by changing its costume, which is just an image. The costumes tab contains everything you need to organize.

Your sprite's costumes click the thumbnail of the Cat sprite and select the costumes tab.

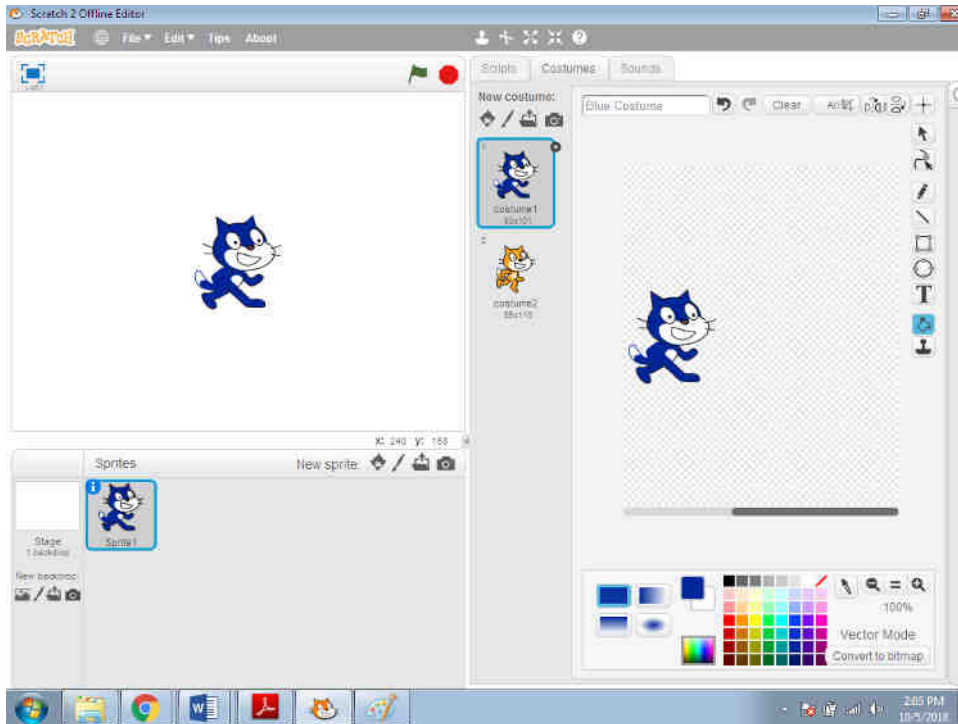
Use edit box to change the name of the selected costume.

Click the "x" to delete the costume.

Also with the help of more tools we can make it more attractive.



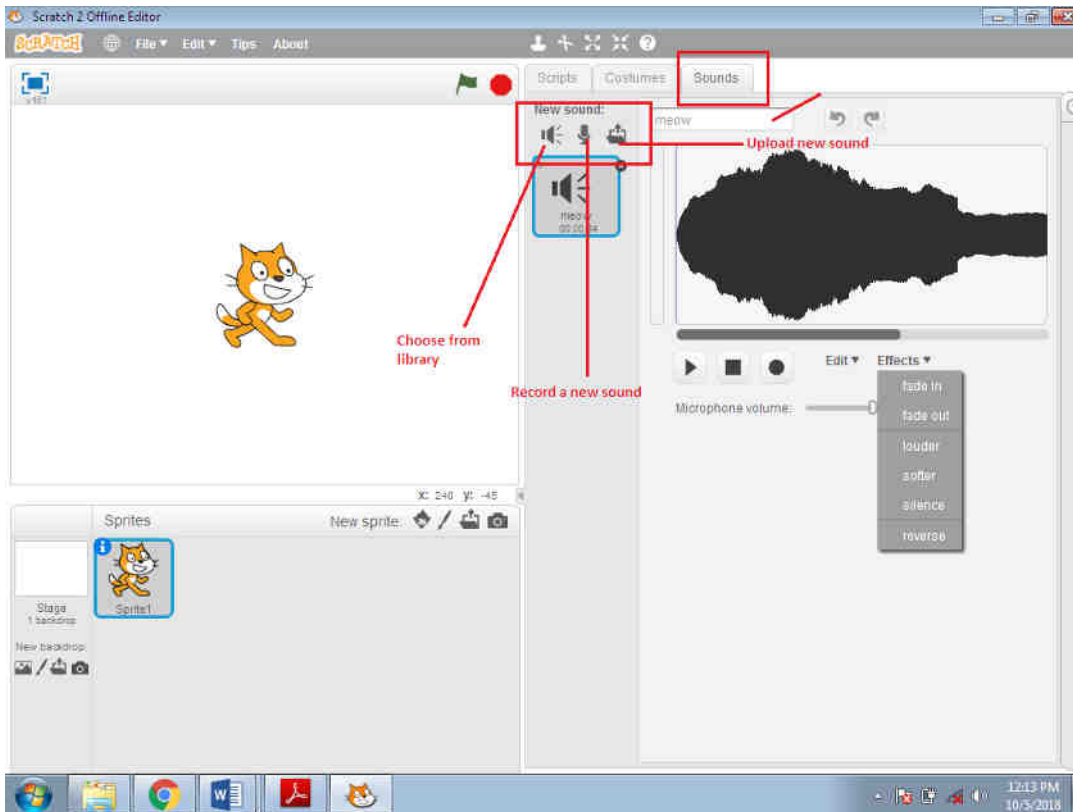
You can change the order of the costumes by dragging and moving the thumbnails.



**Tip Thumbnails-** An image of a graphic or document that is reduced in size so that it serves as an icon of a larger image.

## Sound Tab

Sprites can play sounds, which makes your programs more attractive. We can give different sounds to a sprite like happy or sad. Sounds tab will help you for the different sounds your sprites can play. As shown in figure 1-11, scratch even provides.



The Sounds tab allows you to organize the sounds of a sprite.

1. Choose from library sound file from your computer
2. Record new sound
3. Upload new sound

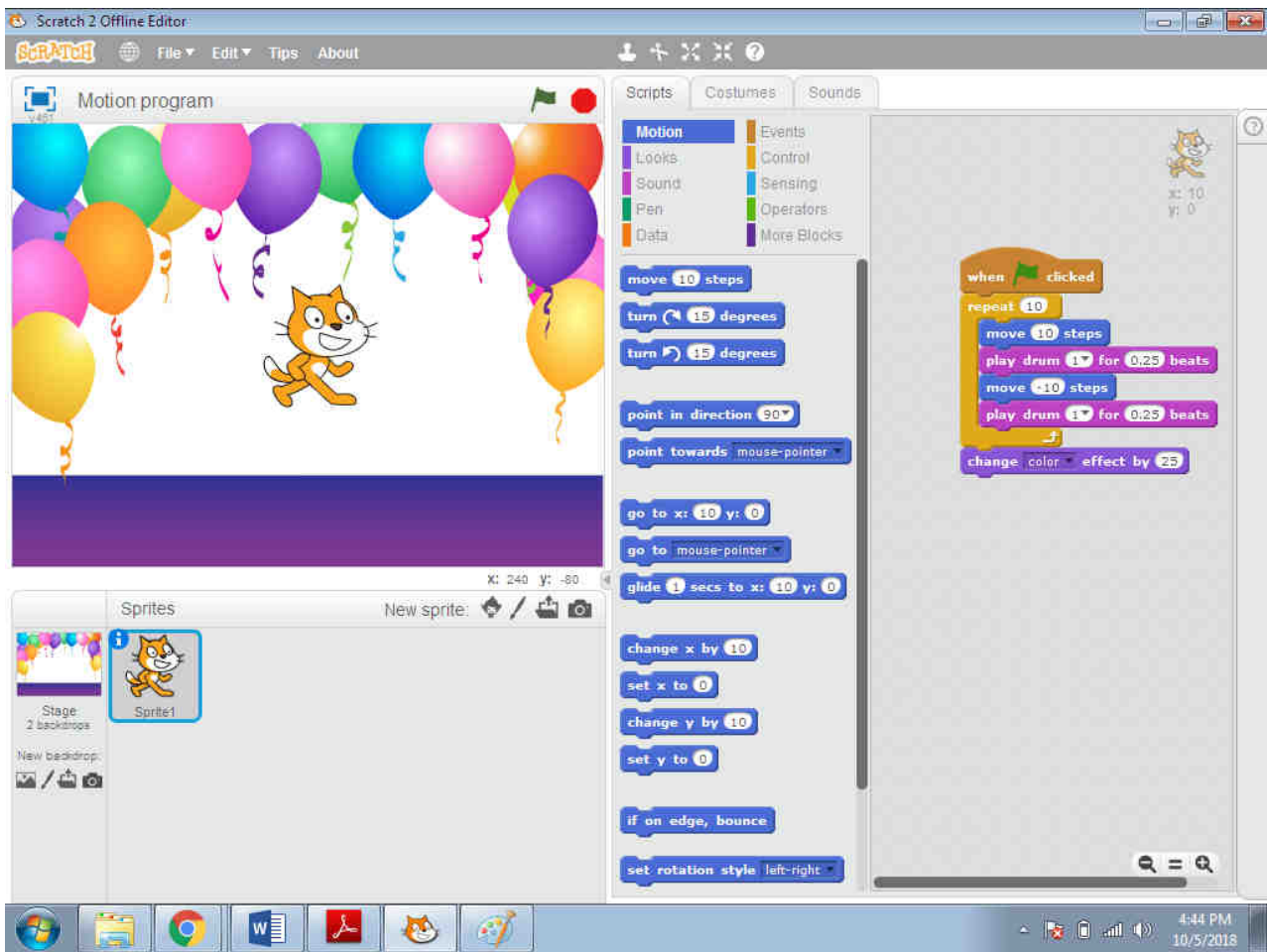
# Chapter 4 Introduction To Scripting

As you are quite familiar with scratch, we will now go to the script tab. Go to the Motion Commands. *Motion commands work with the reference to a sprite's center, which you can set in the Paint Editor.*

Example: Drag block to script area. Now from sound drag play drum to script area. Again move block with -10 value and again play drum with it. Now repeat to the entire script and say something about it from looks tab. And add green flag to start a script

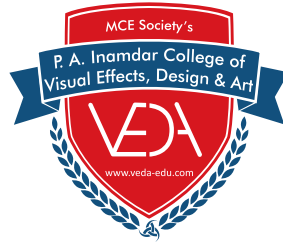


In continuation with above program change color to it. Now press the space bar on your keyboard and watch what happens. You can add new backdrops on the stage.



And add another sprite to the program.






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