

Assignment 1

Name: Shipra Suvarna

Roll No: T23-111

Aim: To understand the benefits of Cloud Infrastructure and Setup AWS Cloud9 IDE, Launch AWS Cloud9 IDE and Perform Collaboration Demonstration.

Theory:

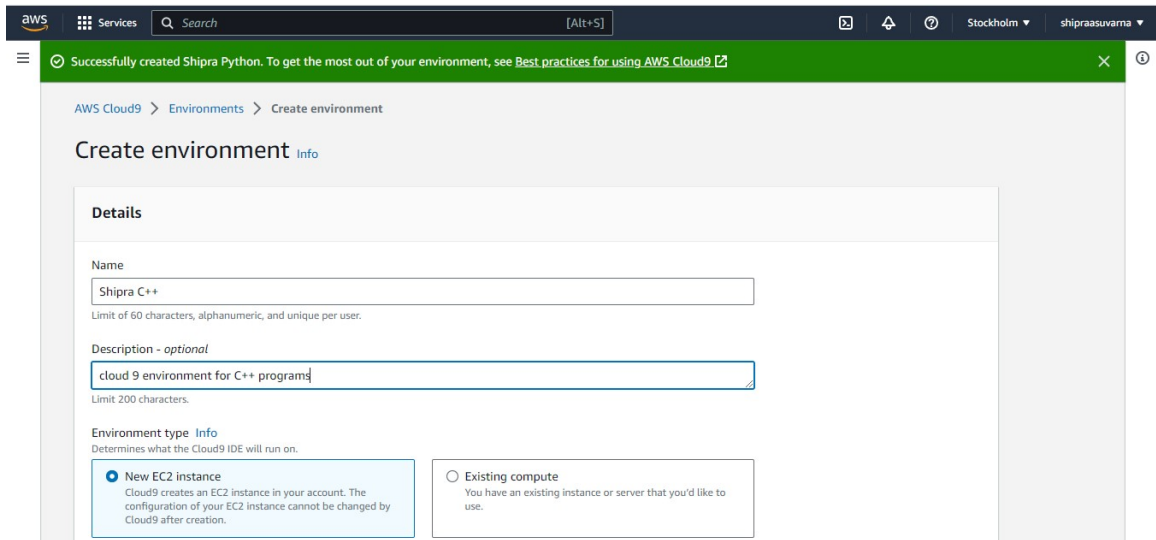
Cloud 9



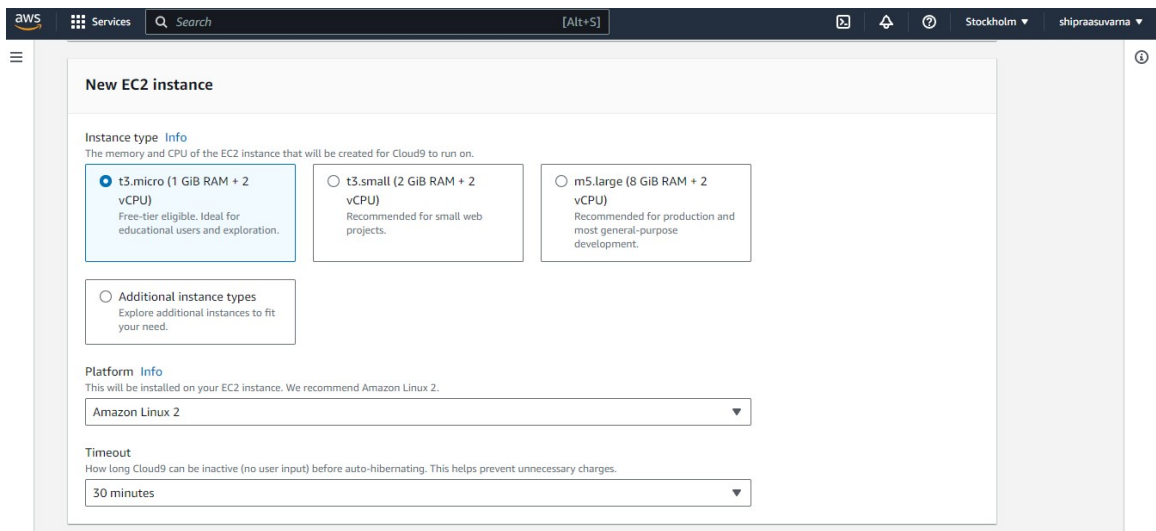
Cloud9 IDE is an Online IDE, published as open source from version 2.0, until version 3.0. It supports multiple programming languages, including C, C++, PHP, Ruby, Perl, Python, JavaScript with Node.js, and Go. It is written almost entirely in JavaScript, and uses Node.js on the back-end.

Steps to create an environment on cloud 9:

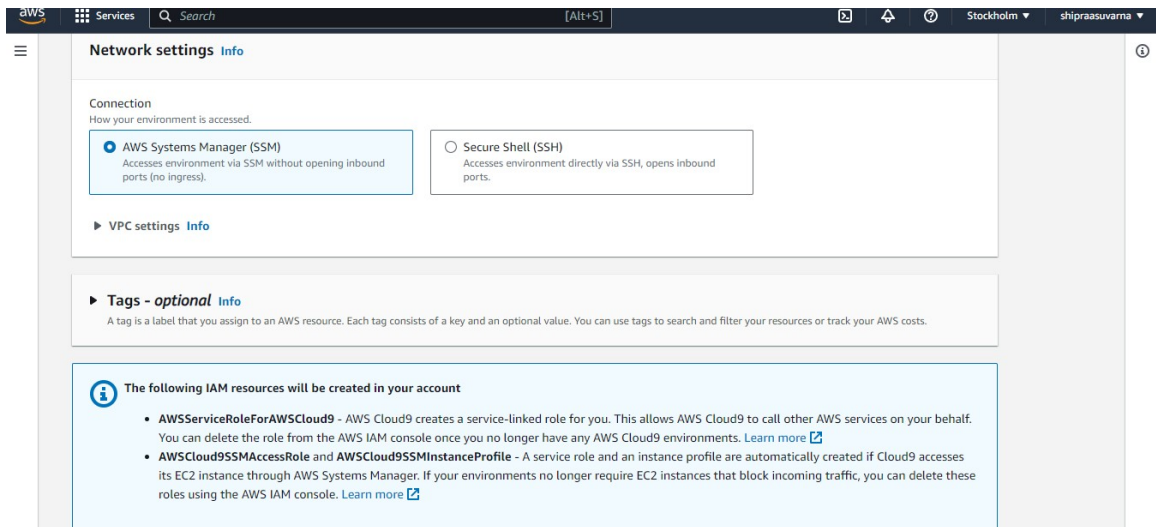
Step1: On the Create environment page enter a name for your environment. To add a description to your environment, enter it in the Description field. For Environment type, choose New EC2 instance to create an Amazon EC2 environment.



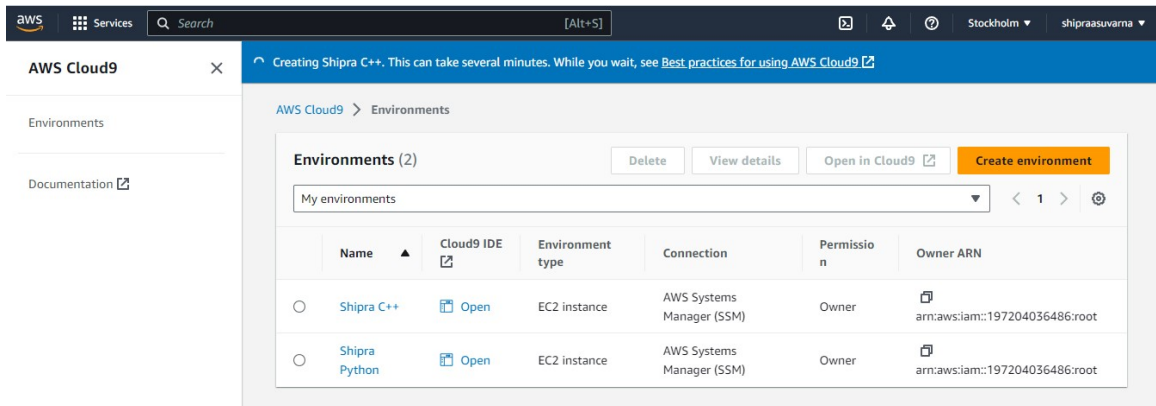
Step 2: For Instance type, choose an instance type with the amount of RAM and vCPUs that you think you need for the kinds of tasks that you want to do. I am going to choose t3.micro. For Platform, choose Amazon Linux 2. Choose a time period for Timeout.



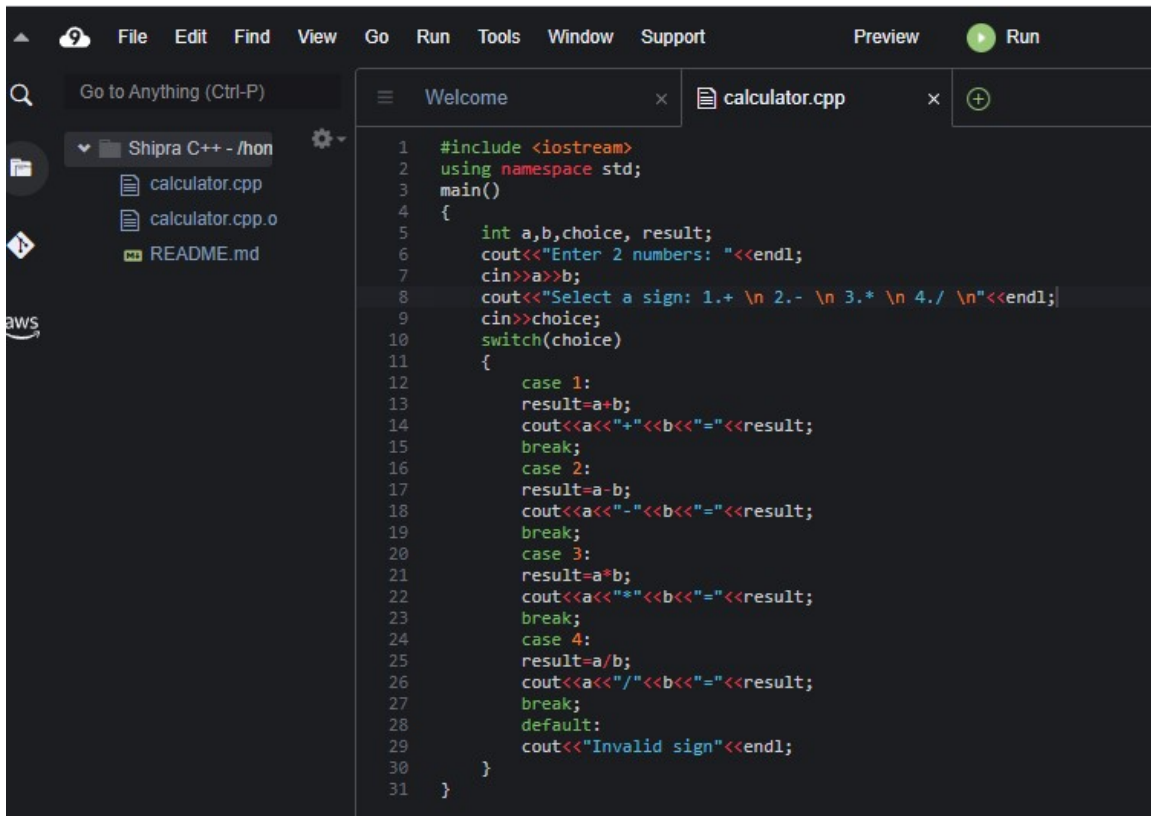
Step 3: On the Network settings panel, choose how your environment is accessed from the two following options: AWS Systems Manager (SSM) – This method accesses the environment using SSM without opening inbound ports.



Step 4: The new environment is created.

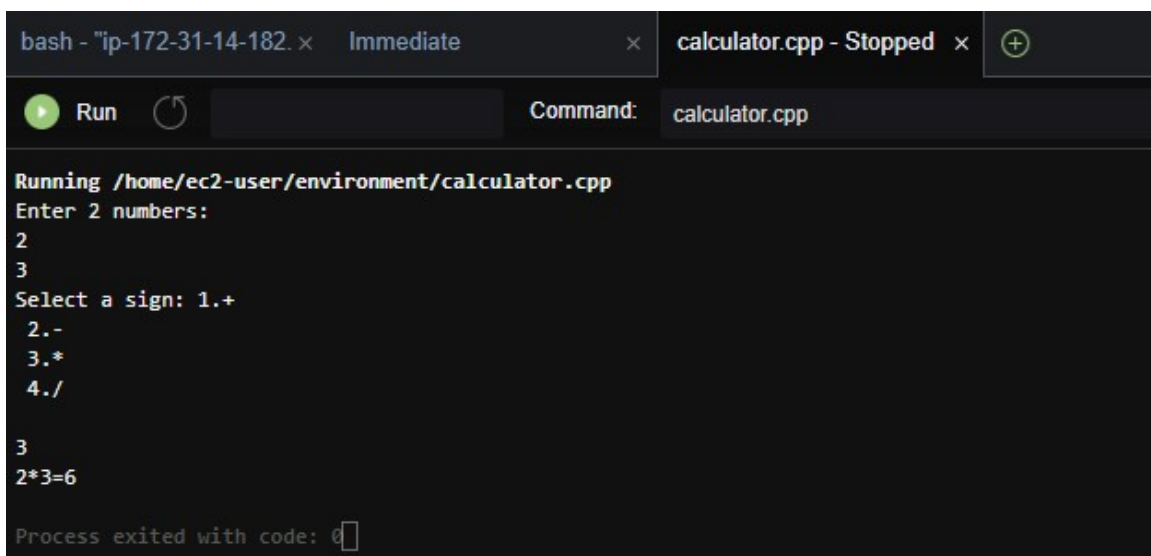


Step 5: Open the new environment, create a new file and write a c++ program to make a calculator.



The screenshot shows a C++ IDE with a dark theme. The left sidebar displays a file explorer for a project named 'Shipra C++ - /hon', containing files 'calculator.cpp', 'calculator.cpp.o', and 'README.md'. The main editor window shows the source code for 'calculator.cpp'. The code includes the `<iostream>` header, uses the `std` namespace, and defines a `main()` function. It declares variables `a`, `b`, `choice`, and `result`. The program prompts the user to enter two numbers and a sign (1 for +, 2 for -, 3 for *, 4 for /). It then uses a `switch` statement to perform the corresponding arithmetic operation and prints the result. If an invalid sign is entered, it prints 'Invalid sign'.

```
1  #include <iostream>
2  using namespace std;
3  main()
4  {
5      int a,b,choice, result;
6      cout<<"Enter 2 numbers: "<<endl;
7      cin>>a>>b;
8      cout<<"Select a sign: 1.+ \n 2.- \n 3.* \n 4./ \n"<<endl;
9      cin>>choice;
10     switch(choice)
11     {
12         case 1:
13             result=a+b;
14             cout<<a<<"+"<<b<<"="<<result;
15             break;
16         case 2:
17             result=a-b;
18             cout<<a<<"-"<<b<<"="<<result;
19             break;
20         case 3:
21             result=a*b;
22             cout<<a<<"*"<<b<<"="<<result;
23             break;
24         case 4:
25             result=a/b;
26             cout<<a<<"/"<<b<<"="<<result;
27             break;
28         default:
29             cout<<"Invalid sign"<<endl;
30     }
31 }
```



The screenshot shows a terminal window with a dark theme. The top bar indicates the current shell is 'bash - "ip-172-31-14-182. x' and the active window is 'calculator.cpp - Stopped x'. Below the bar, there are buttons for 'Run' and a circular arrow icon, and a 'Command:' field containing 'calculator.cpp'. The terminal output shows the program running at the path `/home/ec2-user/environment/calculator.cpp`. It prompts for two numbers, '2' and '3', and a sign, '3'. The output shows the calculation `2*3=6`. At the bottom, it states 'Process exited with code: 0'.

```
Running /home/ec2-user/environment/calculator.cpp
Enter 2 numbers:
2
3
Select a sign: 1.+
2.-
3.*
4./

3
2*3=6

Process exited with code: 0
```

LO Mapped: LO1

Conclusion: Understood the fundamentals of Cloud Computing and are fully proficient with Cloud based DevOps solution deployment options to meet our business requirements.

