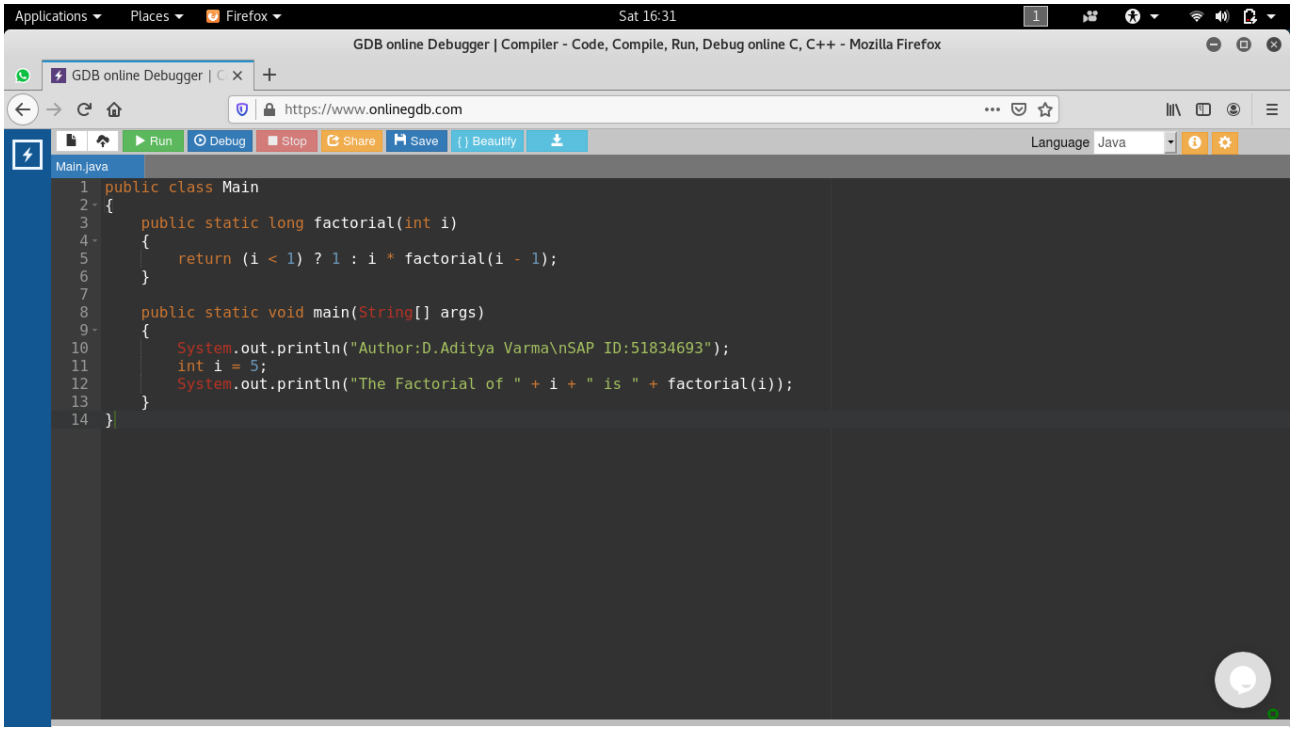
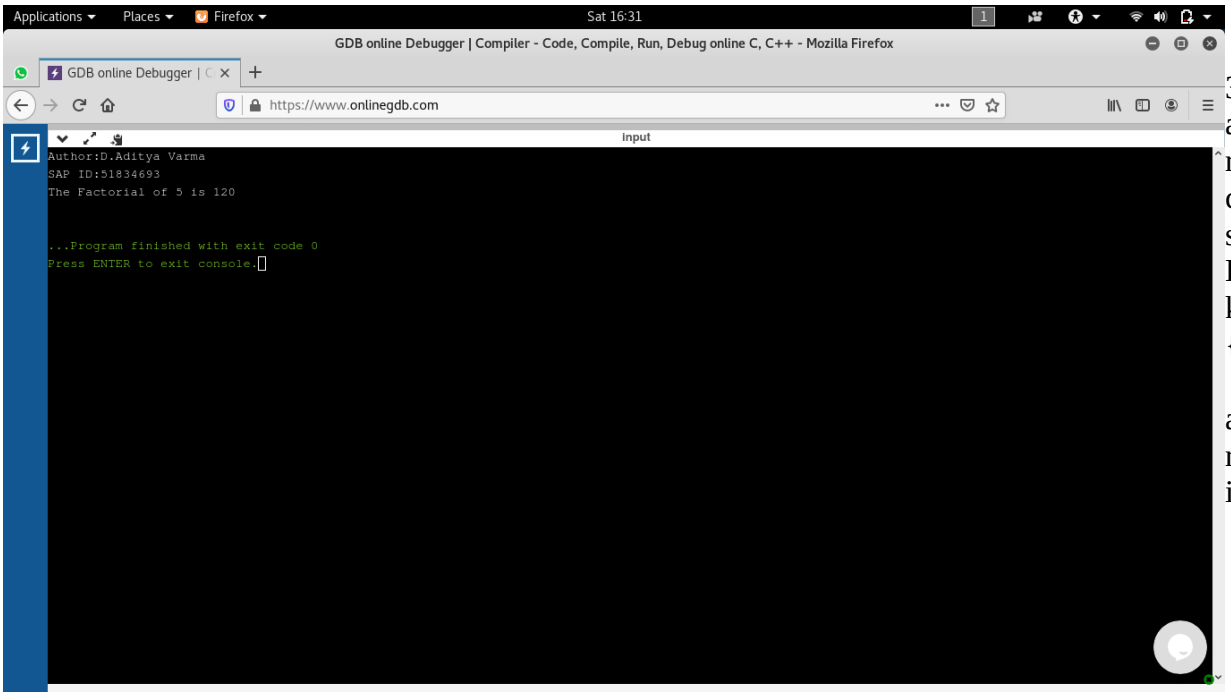
1)public class Main
{
	public static long factorial(int i)
	{
		return (i < 1) ? 1 : i * factorial(i - 1);
	}

	public static void main(String[] args)
	{
		System.out.println("Author:D.Aditya Varma\nSAP ID:51834693");
		int i = 5;
		System.out.println("The Factorial of " + i + " is " + factorial(i));
	}
}

input:



output:



3)
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abst
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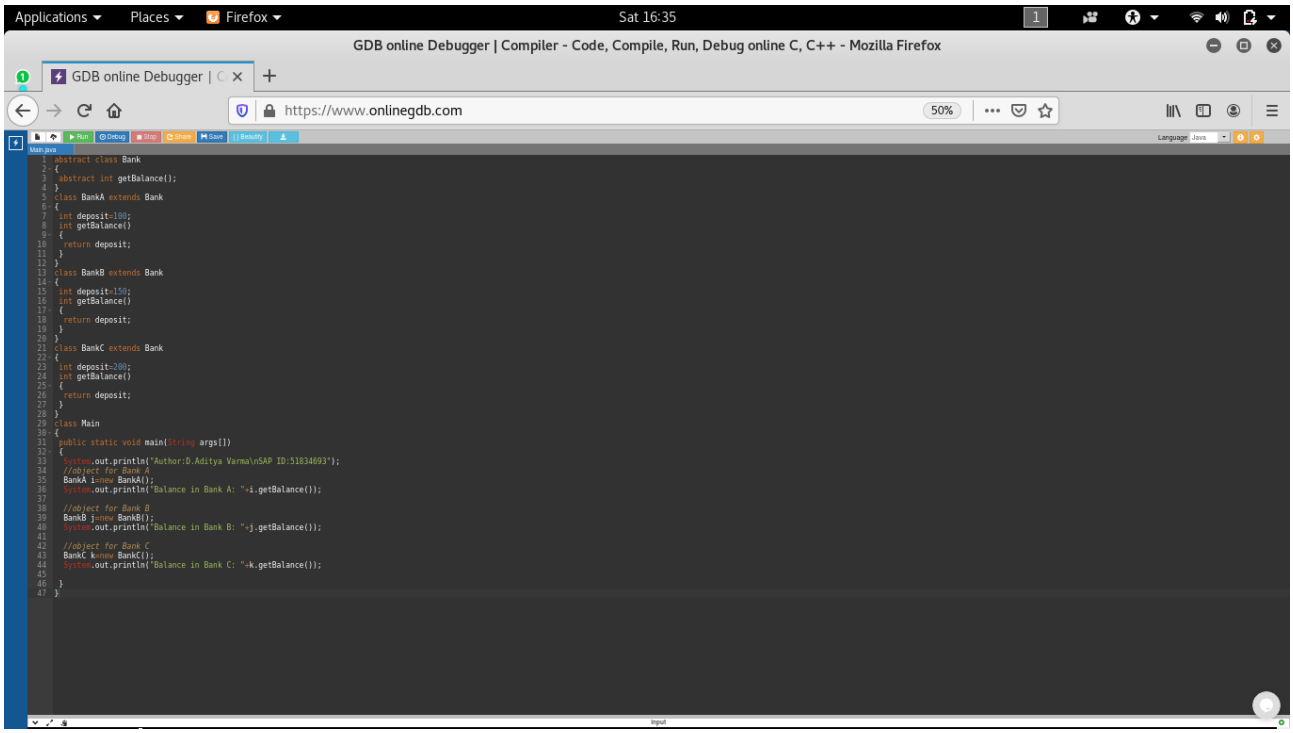
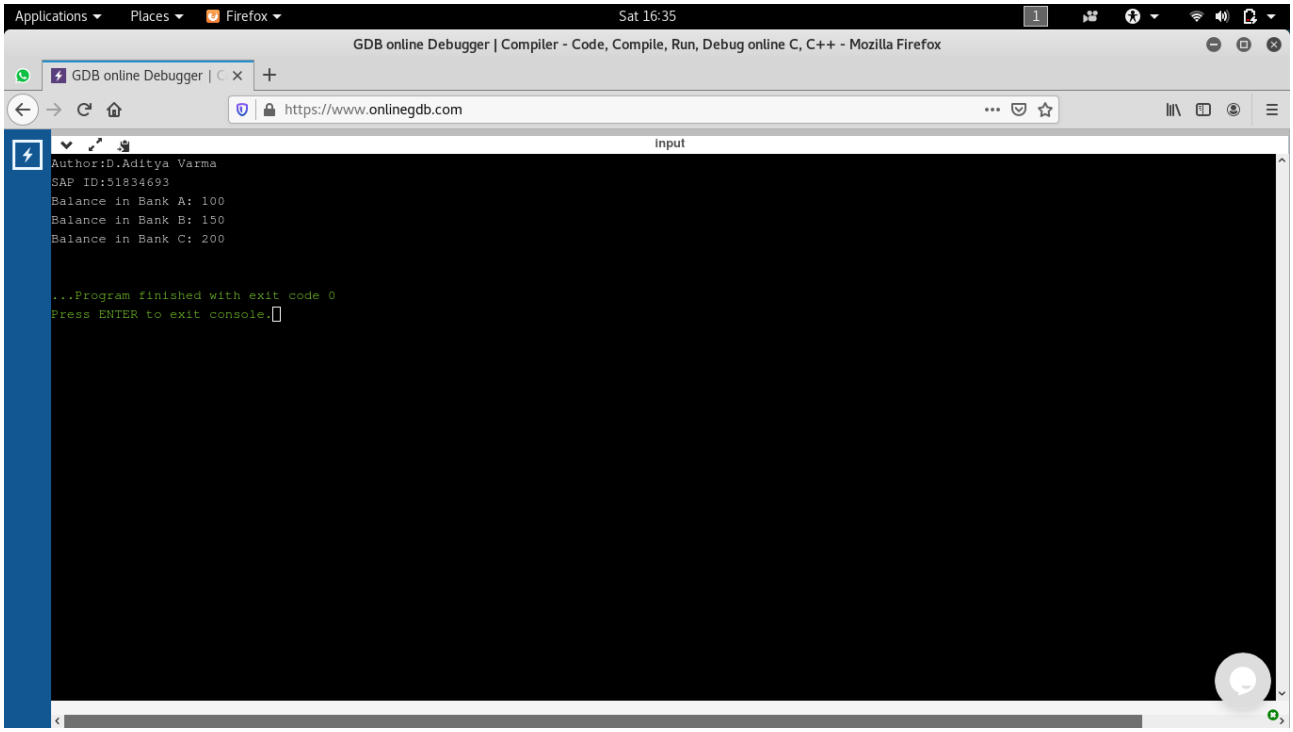
int

```
getBalance();
}
class BankA extends Bank
{
 int deposit=100;
 int getBalance()
 {
  return deposit;
 }
}
class BankB extends Bank
{
 int deposit=150;
 int getBalance()
 {
  return deposit;
 }
}
class BankC extends Bank
{
 int deposit=200;
 int getBalance()
 {
  return deposit;
 }
}
class Main
{
 public static void main(String args[])
 {
  System.out.println("Author:D.Aditya Varma\nSAP ID:51834693");
  //object for Bank A
  BankA i=new BankA();
  System.out.println("Balance in Bank A: "+i.getBalance());

  //object for Bank B
  BankB j=new BankB();
  System.out.println("Balance in Bank B: "+j.getBalance());

  //object for Bank C
  BankC k=new BankC();
  System.out.println("Balance in Bank C: "+k.getBalance());

 }
}
```

input:


Applications
Places
Firefox
Sat 16:35
GDB online Debugger | Compiler - Code, Compile, Run, Debug online C, C++ - Mozilla Firefox
GDB online Debugger
https://www.onlinegdb.com
50%
Main.java
abstract class Bank
{
abstract int getBalance();
}
class BankA extends Bank
{
int deposit=100;
int getBalance()
{
return deposit;
}
}
class BankB extends Bank
{
int deposit=150;
int getBalance()
{
return deposit;
}
}
class BankC extends Bank
{
int deposit=200;
int getBalance()
{
return deposit;
}
}
class Main
{
public static void main(String args[])
{
System.out.println("Author:D.Aditya Varma\nSAP ID:51834693");
//object for Bank A
BankA i=new BankA();
System.out.println("Balance in Bank A: "+i.getBalance());
//object for Bank B
BankB j=new BankB();
System.out.println("Balance in Bank B: "+j.getBalance());
//object for Bank C
BankC k=new BankC();
System.out.println("Balance in Bank C: "+k.getBalance());
}
}

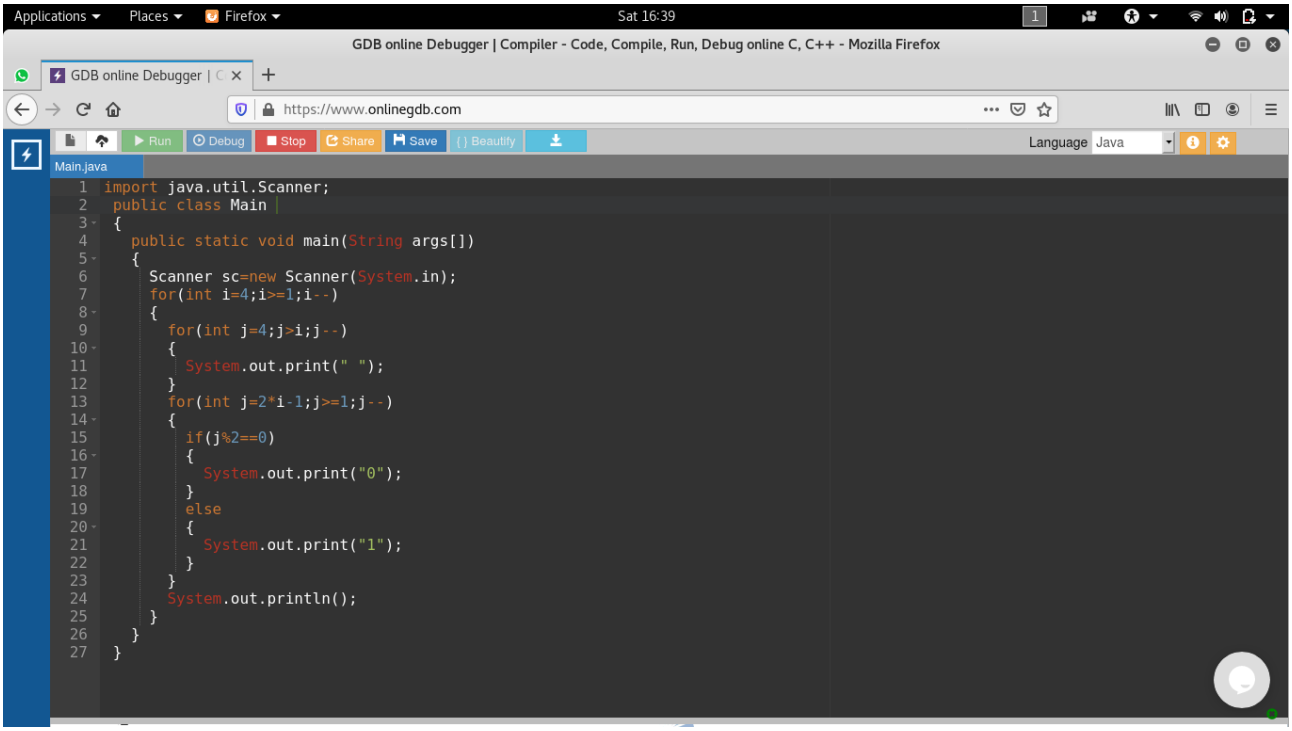
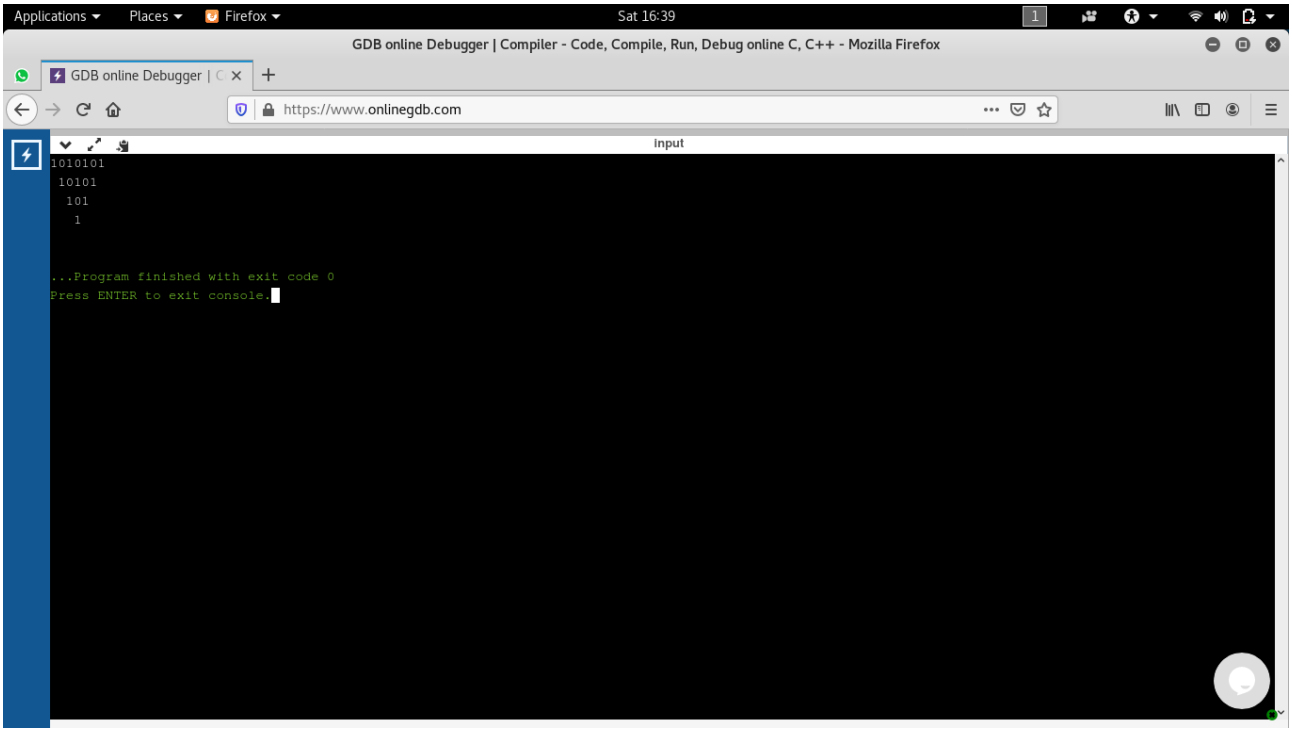
output:


Applications
Places
Firefox
Sat 16:35
GDB online Debugger | Compiler - Code, Compile, Run, Debug online C, C++ - Mozilla Firefox
GDB online Debugger
https://www.onlinegdb.com
Input
Author:D.Aditya Varma
SAP ID:51834693
Balance in Bank A: 100
Balance in Bank B: 150
Balance in Bank C: 200
...Program finished with exit code 0
Press ENTER to exit console.

4)

```
import java.util.Scanner;
 class Pattern
 {
   public static void main(String args[])
   {
     Scanner sc=new Scanner(System.in);
     for(int i=4;i>=1;i--)
     {
       for(int j=4;j>i;j--)
       {
         System.out.print(" ");
       }
       for(int j=2*i-1;j>=1;j--)
       {
         if(j%2==0)
         {
           System.out.print("0");
         }
         else
         {
           System.out.print("1");
         }
       }
       System.out.println();
     }
   }
 }
```

input:



output: