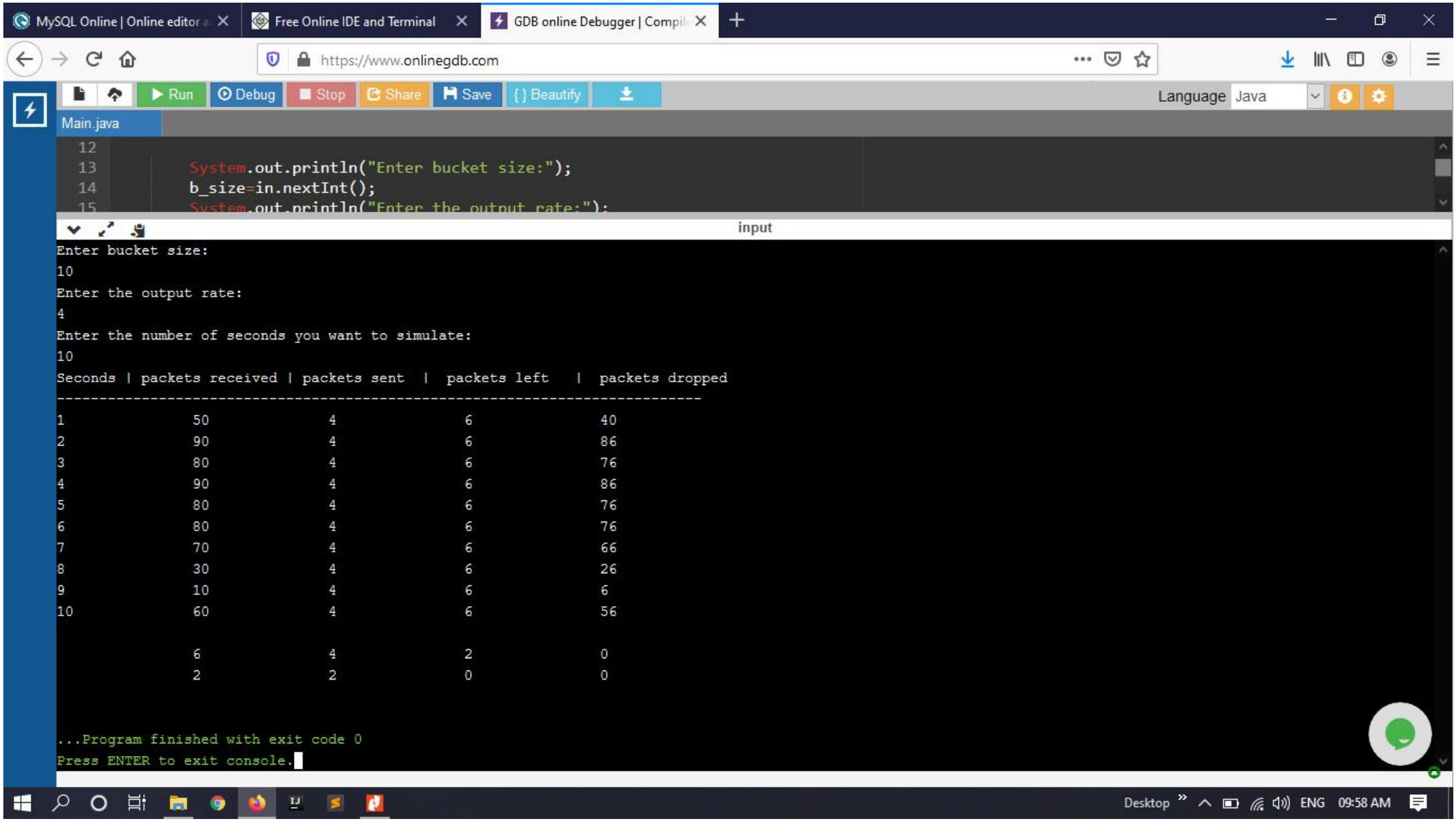
```
import java.lang.*;
import java.util.Random;
import java.io.*;
import java.util.Scanner;

class Main {
 public static void main(String args[]) {
      int drop=0,mini,nsec,p_remain=0;
      int o_rate,b_size,i,packet[];
      packet=new int[100];
      Scanner in=new Scanner(System.in);

      System.out.println("Enter bucket size:");
      b_size=in.nextInt();
      System.out.println("Enter the output rate:");
      o_rate=in.nextInt();
      System.out.println("Enter the number of seconds you want to simulate:");
      nsec=in.nextInt();

      Random rand=new Random();

      for(i=0;i<nsec;i++)
         packet[i]=((rand.nextInt(9)+1)*10);


      System.out.println("Seconds | packets received | packets sent  |  packets left   |  packets dropped");
      System.out.println("--------------------------------------------------------------------------------");

      for(i=0;i<nsec;i++){
         p_remain+=packet[i];

         if(p_remain>b_size){
            drop=p_remain-b_size;
            p_remain=b_size;

            System.out.print(i+1+"\t\t");
            System.out.print(packet[i]+"\t\t");

            mini=Math.min(p_remain,o_rate);
            System.out.print(mini+"\t\t");

            p_remain=p_remain-mini;
            System.out.print(p_remain+"\t\t");
            System.out.print(drop+"\t\t");
            System.out.println();
            drop=0;
         }
      }


      System.out.println();
      while(p_remain!=0){
         if(p_remain>b_size){
            drop=p_remain-b_size;
```

```
            p_remain=b_size;
        }

        mini=Math.min(p_remain,o_rate);
        System.out.print("\t\t"+p_remain+"\t\t"+mini);
        p_remain=p_remain-mini;
        System.out.println("\t\t"+p_remain+"\t\t"+drop);
        drop=0;
      }
   }
}
```

Computer Network Lab Program = 12

```
import 'java.lang.*';
import 'java.util.*';
import 'java.io.*';

class Main{
  public static void main(String args[]){
      int drop=0, mini, nsec, p_remain=0;
      int o_rate, b_size, i, packet[];
      packet = new int[100];
      Scanner in = new Scanner(System.in);

      System.out.println("Enter bucket size");
      b_size = in.nextInt();
      System.out.println("Enter output rate");
      o_rate = in.nextInt();
      System.out.println("Enter number of second
                  you want to simulate");

      nsec = in.nextInt();

      for(i=0; i<nsec; i++)
        packet[i] = ((rand.nextInt(9)+1)*10);

      System.out.println("Second\t Packets received \t
          Packets sent \t Packet left \t Packets dropped");

      for(i=0; i<nsec; i++){
          p_remain += packet[i];
          if(p_remain > b_size){
```

```
drop = p_remain - b_size;
p_remain = b_size;

System.out.println(i+1 + "\t\t");
System.out.println(packet[i] + "\t\t");

mini = Math.min(p_remain, o_rate);
System.out.println(mini + "\t\t");

p_remain = p_remain - mini;
System.out.println(p_remain + "\t\t");
System.out.println(drop + "\t\t");
System.out.println();
drop=0;
}

}

while(p_remain != 0){
    if (p_remain > b_size){
        drop= p_remain - b_size;
        p_remain = b_size;
    }
    mini = Math.min(p_remain, o_rate);
    System.out.println("\t\t"+p_remain + "\t\t"+mini);
    p_remain = p_remain-mini;
    System.out.println("\t\t"+p_remain + "\t\t"+drop);
    drop=0;
}

}

}
```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Run
Debug
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{ } Beautify
Language Java
Main.java
System.out.println("Enter bucket size:");
b_size=in.nextInt();
System.out.println("Enter the output rate:");
input
Enter bucket size:
10
Enter the output rate:
4
Enter the number of seconds you want to simulate:
10
Seconds | packets received | packets sent | packets left | packets dropped
1 50 4 6 40
2 90 4 6 86
3 80 4 6 76
4 90 4 6 86
5 80 4 6 76
6 80 4 6 76
7 70 4 6 66
8 30 4 6 26
9 10 4 6 6
10 60 4 6 56
6 4 2 0
2 2 0 0
...Program finished with exit code 0
Press ENTER to exit console.
Desktop
ENG
09:58 AM