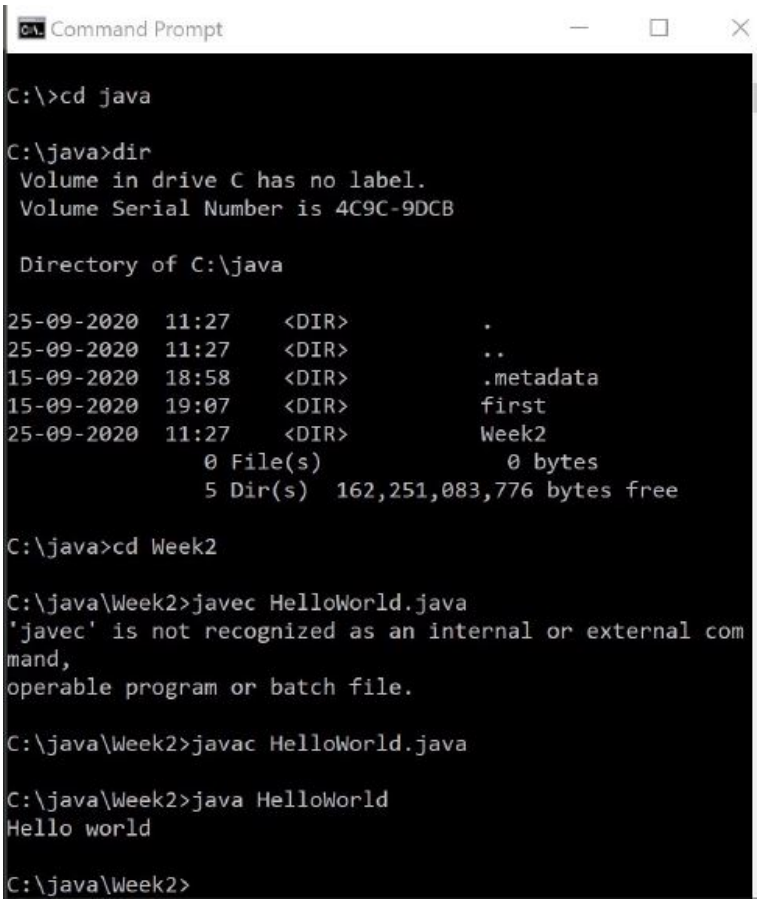
1.

```
public class HelloWorld
{
  public static void main (String args[])
  {
    System.out.println ("Hello world");
  }
}
```

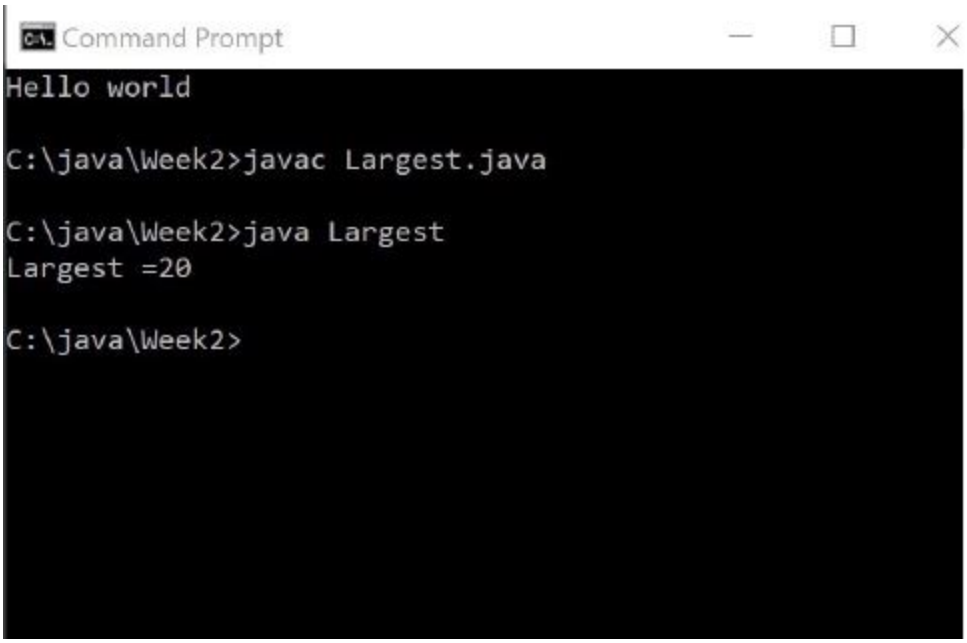
Output:



2.

```
public class Largest
{
  public static void main (String args[])
  {
    int a = 10, b = 20, c = 15, largest;
    if (a > b)
     {
            if (a > c)
              largest = a;
            else
              largest = c;
     }
    else
     {
            if (b > c)
              largest = b;
            else
              largest = c;
     }
    System.out.println ("Largest =" + largest);
  }
}
```

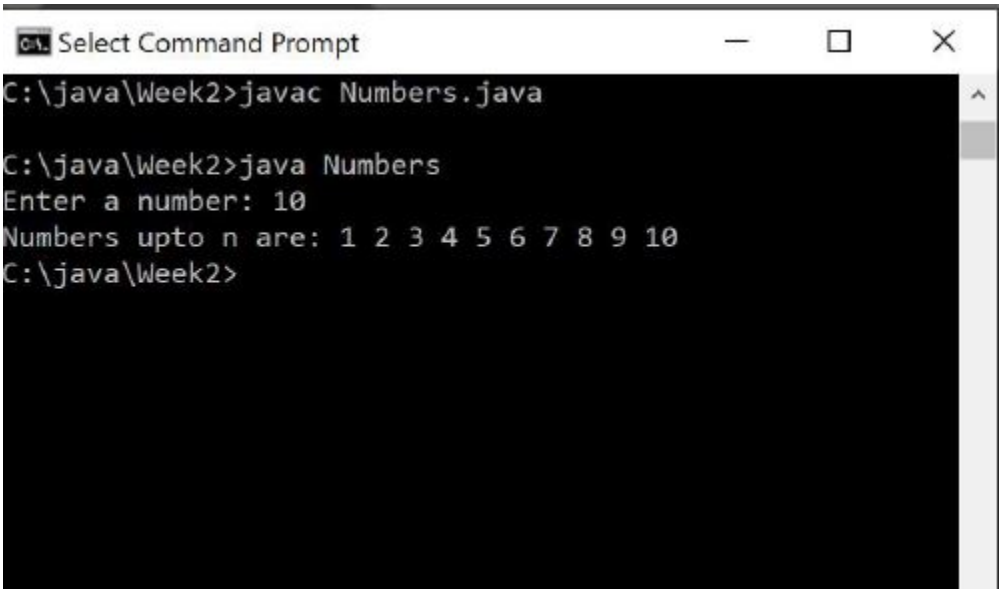
Output:



3.

```
import java.util.Scanner;
class Numbers
{
  public static void main (String[]args)
  {
    int n;
    Scanner in = new Scanner (System.in);
      System.out.print ("Enter a number: ");
      n = in.nextInt ();
      System.out.print ("Numbers upto n are: ");
    for (int i = 0; i < n; i++)
      {
            System.out.print (i + " ");
      }
  }
}
```

Output:

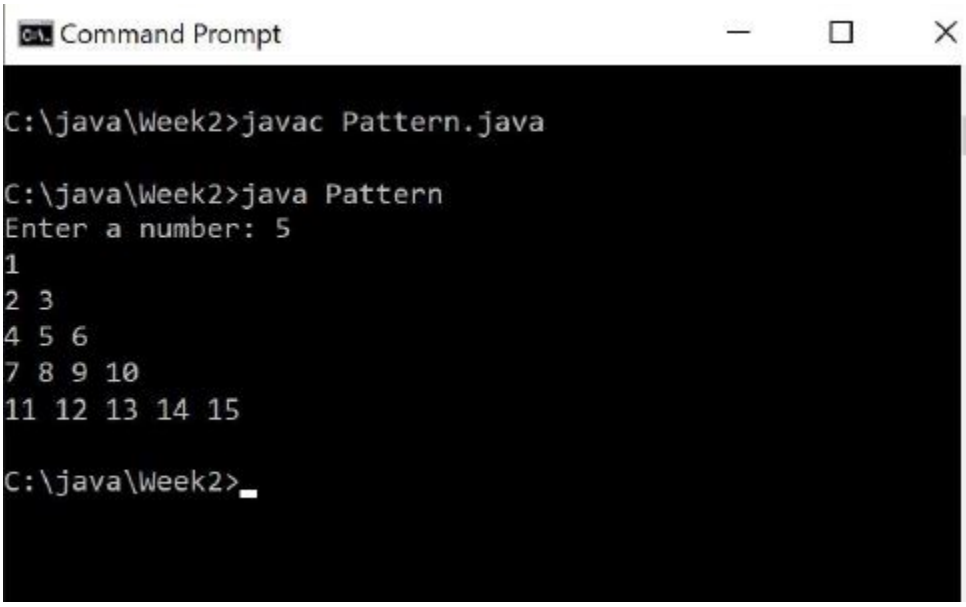


4.

```
import java.util.*;
class Pattern
{
  public static void main (String args[])
  {
    int n, count = 1;
    Scanner in = new Scanner (System.in);
      System.out.print ("Enter a number: ");
      n = in.nextInt ();
    for (int i = 1; i <= n; i++)
      {
            for (int j = 0; j < i; j++)
              {
                System.out.print (count + " ");
                count++;
              }
```

```
            System.out.print ("\n");
        }
    }
}
```

Output:

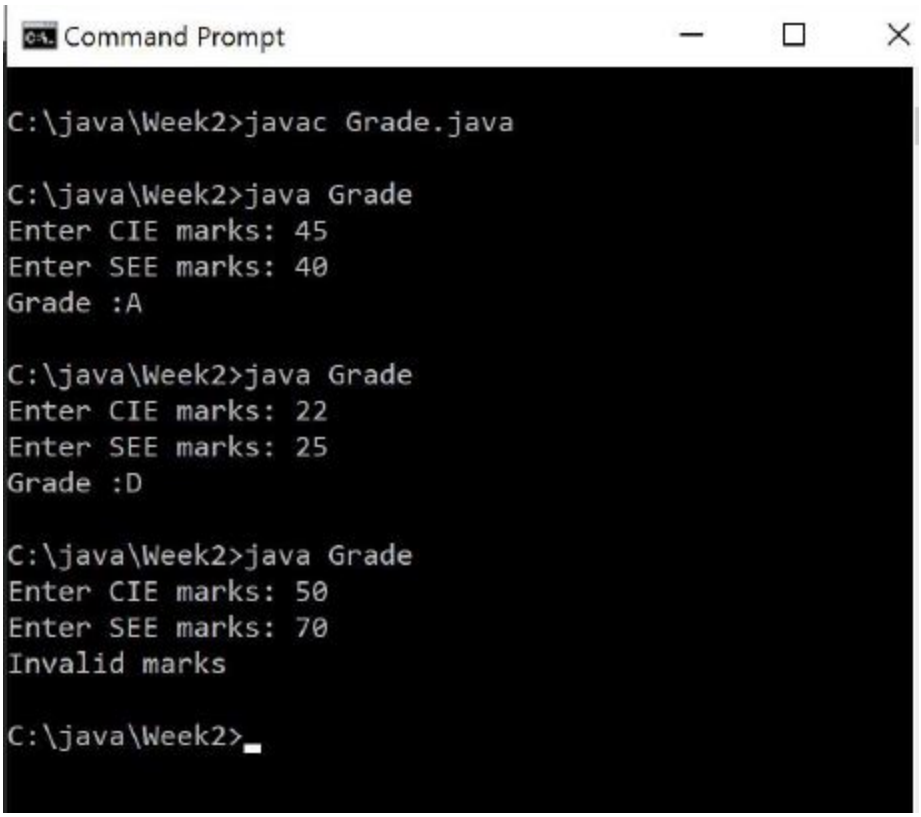


5.

```
import java.util.*;
import java.lang.*;
class Grade
{
  public static void main (String args[])
  {
    int cie, see, mark;
    char grade = '*';
    Scanner in = new Scanner (System.in);
      System.out.print ("Enter CIE marks: ");
```

```
    cie = in.nextInt ();
    System.out.print ("Enter SEE marks: ");
    see = in.nextInt ();
    mark = see + cie;
  if (mark > 100)
    {
          System.out.println ("Invalid marks");
          System.exit (0);
    }
  else if (mark >= 90)
     grade = 'S';
  else if (mark >= 80)
    grade = 'A';
  else if (mark >= 70)
    grade = 'B';
  else if (mark >= 60)
    grade = 'C';
  else if (mark >= 40)
    grade = 'D';
  else
    grade = 'F';
  System.out.println ("Grade :" + grade);
 }
}
```

Output:

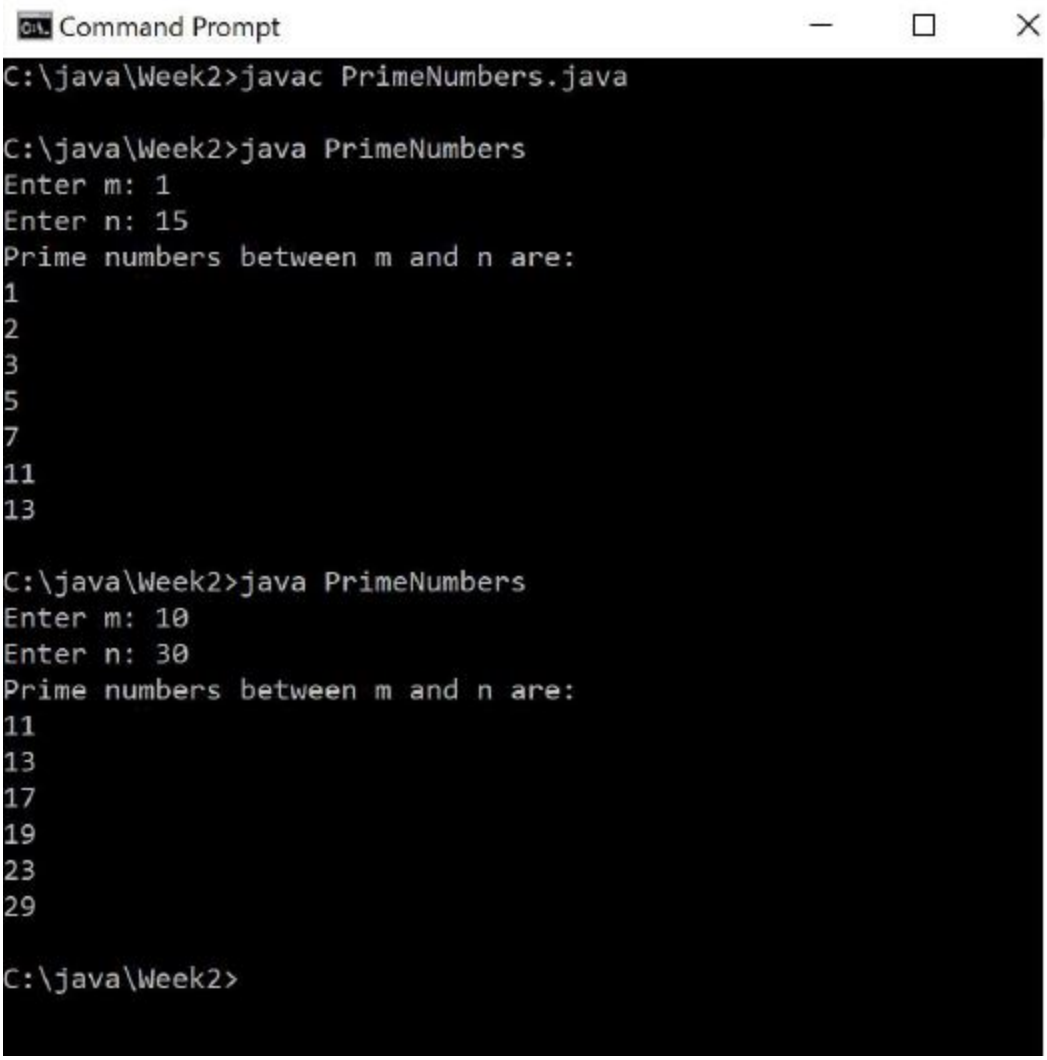


6.

```
import java.util.*;
class PrimeNumbers
{
  public static void main (String args[])
  {
    int m, n, status;
    Scanner in = new Scanner (System.in);
      System.out.print ("Enter m: ");
      m = in.nextInt ();
      System.out.print ("Enter n: ");
      n = in.nextInt ();
      System.out.print ("Prime numbers between m and n are:\n");
    if (m == 0 || m == 1)
```

```
    {
        System.out.print ("1\n");
        m = 2;
    }
   for (int i = m; i <= n; i++)
    {
        status = 0;
        for (int j = 2; j <= i / 2; j++)
         {
           if (i % j == 0)
            {
                status = 1;
                break;
            }
         }
        if (status == 0)
         {
           System.out.println (i);
         }
    }
 }
}
```

Output:



7.

```
#include<stdio.h>
#include<string.h>
int iot;
int advanced_java;
int advanced_data;
typedef struct student
{
  char name[50];
  char course[50];
```

```
} std;
int
main ()
{
  char elective1[50] = "Internet Of Things";
  char elective2[50] = "Advanced Java And J2EEE";
  char elective3[50] = "Advanced DataStructures";
  printf
    ("Courses available are \n \t 1:Internet Of Things\n \t2:Advanced Java And J2EEE\n \t3:Advanced
DataStructures\n");
  int n;
  int choice;
  printf ("Enter the number of students\n");
  scanf (" %d", &n);
  std s[n];
  for (int i = 0; i < n; i++)
    {
      printf ("Enter the name of student %d \n", (i + 1));
      scanf (" %s", s[i].name);
      fflush (stdin);
      printf ("Enter the elective of student %d \n", (i + 1));
      printf ("enter your choice\n");
      fflush (stdin);
      scanf (" %d", &choice);
      switch (choice)
            {
            case 1:
              strcpy (s[i].course, elective1);
              break;
```

```
        case 2:
          strcpy (s[i].course, elective2);
          break;
        case 3:
          strcpy (s[i].course, elective3);
          break;
        }
   fflush (stdin);
  }
for (int i = 0; i < n; i++)
  {
   if (strncmp (elective1, s[i].course, strlen (elective1)) == 0)
        {
          printf ("Student %s has selected for %s course\n", s[i].name,
                  s[i].course);
          iot++;
        }
   if (strncmp (elective2, s[i].course, strlen (elective2)) == 0)
        {
          printf ("Student %s has selected for %s course\n", s[i].name,
                  s[i].course);
          advanced_java++;
        }
   if (strncmp (elective3, s[i].course, strlen (elective3)) == 0)
        {
          printf ("Student %s has selected for %s course\n", s[i].name,
                  s[i].course);
          advanced_data++;
        }
```

```
 }
printf ("**************************************\n");
printf ("Number of student applied for internet of things is %d\n", iot);
printf ("Number of students applied for Advanced java and J2EEE is %d\n",
          advanced_java);
printf ("Number of student applied for Advanced DataStructures is %d\n",
          advanced_data);
if (iot < 30)
 {
   for (int i = 0; i < n; i++)
         {
          if (strncmp (s[i].course, elective1, strlen (elective1)) == 0)
           {
             printf
                   (" %s please select from the other two course this course cannot be floated\n",
                    s[i].name);
             printf
                   ("2:Advanced Java And J2EEE\n3:Advanced DataStructures\n");
             printf ("Enter your new choice\n");
             scanf (" %d", &choice);
             iot = 0;
             switch (choice)
                   {
                   case 2:
                     strcpy (s[i].course, elective2);
                     advanced_java++;
                     break;
                   case 3:
                     strcpy (s[i].course, elective3);
```

```
                    advanced_data++;
                    break;
                   }
            }
        }
 }
if (advanced_java < 30)
 {
   for (int i = 0; i < n; i++)
        {
          if (strncmp (s[i].course, elective2, strlen (elective2)) == 0)
            {
              printf
                    (" %s please select from the other two course this course cannot be floated\n",
                     s[i].name);
              printf ("1:Internet Of Things\n3:Advanced DataStructures\n");
              printf ("Enter your new choice\n");
              scanf (" %d", &choice);
              advanced_java = 0;
              switch (choice)
                    {
                    case 1:
                      strcpy (s[i].course, elective1);
                      iot++;
                      break;
                    case 3:
                      strcpy (s[i].course, elective3);
                      advanced_data++;
                      break;
```

```
                    }
                }
            }
        }
if (advanced_data < 30)
 {
   for (int i = 0; i < n; i++)
        {
          if (strncmp (s[i].course, elective3, strlen (elective3)) == 0)
            {
              printf
                    (" %s please select from the other two course this course cannot be floated\n",
                     s[i].name);
              printf ("1:Internet Of Things\n2:Advanced JAVA and J2EEE\n");
              printf ("Enter your new choice\n");
              scanf (" %d", &choice);
              advanced_data = 0;
              switch (choice)
                    {
                    case 1:
                      strcpy (s[i].course, elective1);
                      iot++;
                      break;
                    case 2:
                      strcpy (s[i].course, elective2);
                      advanced_java++;
                      break;
                    }
            }
```

```
            }
    }
  printf ("************AfterReselection**************\n");
  printf ("Number of student applied for internet of things is %d\n", iot);
  printf ("Number of students applied for Advanced java and J2EEE is %d\n",
              advanced_java);
  printf ("Number of student applied for Advanced DataStructures is %d\n",
              advanced_data);
  printf ("*****************************************\n");
  for (int i = 0; i < n; i++)
    {
      printf ("%s has selected %s course\n", s[i].name, s[i].course);
    }
}
```

Output: