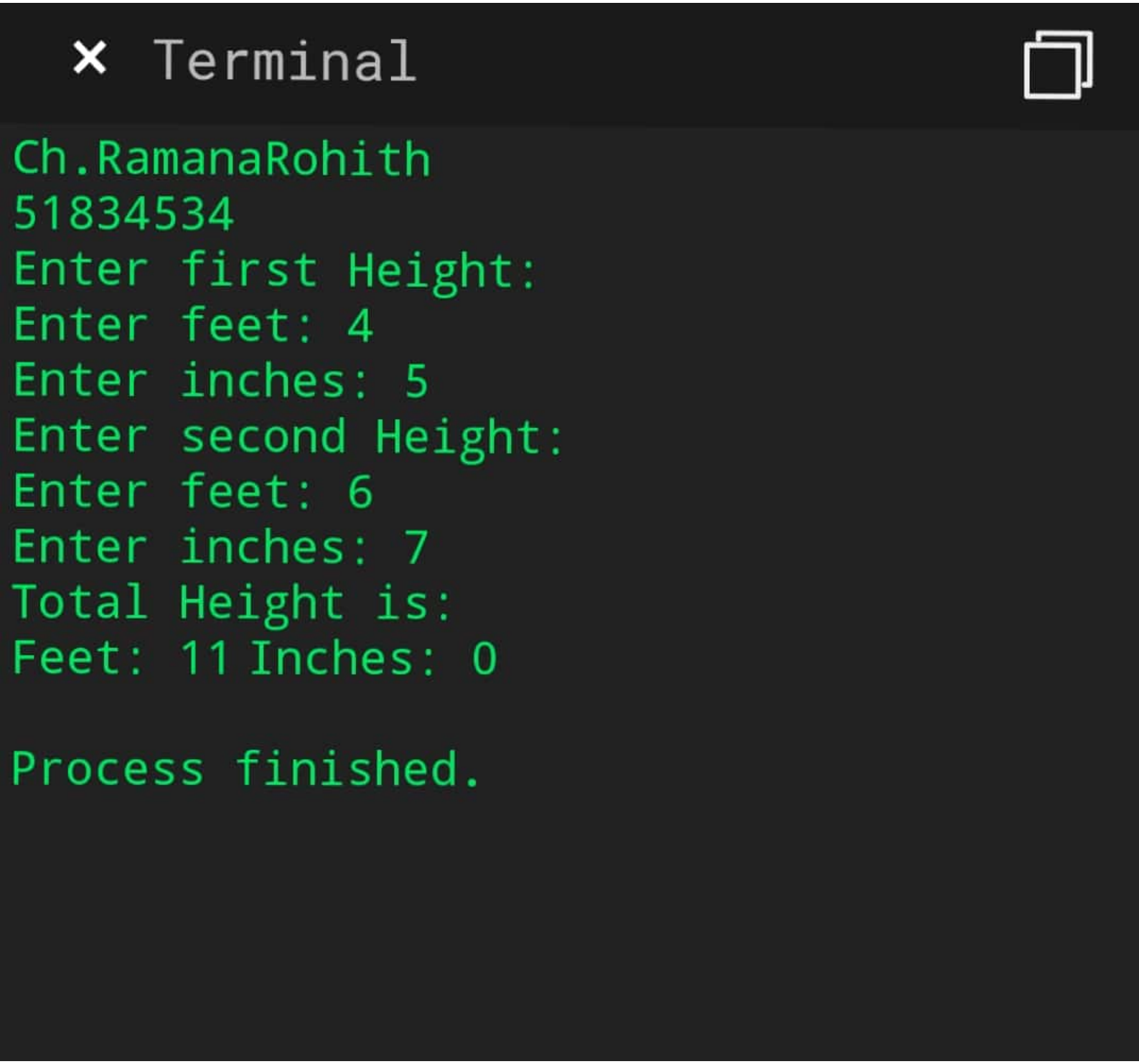
```java
//1st question
import java.util.*;
class Height
{
  private int feet;
  private int inches;
    public void getDistance()
  {
    Scanner sc=new Scanner(System.in);
      System.out.print("Enter feet: ");
    feet=sc.nextInt();
    System.out.print("Enter inches: ");
    inches=sc.nextInt();
  }
  public void showDistance()
  {
    System.out.println("Feet: "+ feet + "\tInc
  }
  public void addDistance(Height H1, Height H2
  {
    inches=H1.inches+H2.inches;
    feet=H1.feet+H2.feet+(inches/12);
    inches=inches%12;
  }
}
public class Main
{
  public static void main(String []s)
  {
    try
    {
          Height H1=new Height();
      Height H2=new Height();
      Height H3=new Height();
      System.out.println("Ch.RamanaRohith\n518
      System.out.println("Enter first Height:
      H1.getDistance();
      System.out.println("Enter second Height:
      H2.getDistance();
      H3.addDistance(H1,H2);
      System.out.println("Total Height is:" );
```

```
40          H3.addDistance(H1,H2);
41          System.out.println("Total Height is:" );
42          H3.showDistance();
43        }
44        catch (Exception e)
45        {
46          System.out.println("Exception occurred :
47        }
48    }
49 }
```



```java
//2ndquestion
abstract class Furniture {
  protected String color;
  protected int width;
  protected int height;
  public abstract void accept();
  public abstract void display();
 }
  class chair extends Furniture {
  private int numOf_legs;
  public void accept() {

  color = "Brown";
  width = 36;
  height = 48;
  numOf_legs = 4;
 }
    public void display()    {
  System.out.println("DISPLAYING VALUE FOR CHA
  System.out.println("Color is" + color);
  System.out.println("Width is" + width);
  System.out.println("Height is" + height);
  System.out.println("Number of legs is" + nu
  System.out.println(" ");
  }
 }

 class Bookshelf extends Furniture
{
  private int numOf_shelves;
  public void accept()
  {
   color ="Black";
   width = 72;
   height = 84;
   numOf_shelves = 4;
  }
  public void display ()
  {
   System.out.println("DISPLAYING VALUES FOR F
```

```
41      System.out.println("Color is" + color);
42      System.out.println("Width is" + width);
43      System.out.println("Height is" + height);
44      System.out.println("Number of shelves is" +
45      System.out.println(" ");
46    }
47  }
48  class FurnitureDemo
49  {
50    public static void main(String[] args)
51    {
52      System.out.println(" Ch.Ramana Rohith\n5183
53      Bookshelf b1 = new Bookshelf();
54      b1.accept();
55      b1.display();
56      chair c1 = new chair ();
57      c1.accept();
58      c1.display();
59
60    }
61  }
```

Make public

```
 Ch.Ramana Rohith
51834534
DISPLAYING VALUES FOR BOOKSHELF
Color isBlack
Width is72
Height is84
Number of shelves is4

DISPLAYING VALUE FOR CHAIR
Color isBrown
Width is36
Height is48
Number of legs is4


Process finished.
```

```java
//4thquestion
import java.util.*;
public class PalindromePattern
{
    public static void main(String[] args)
    {
        int i,j,k;
        Scanner sc=new Scanner(System.in);
        System.out.println("enter no.of rows");

       int n=sc.nextInt();

        for(i=0; i<n; i++)
        {
            k=1;
            for(j=0; j<(n+i); j++)
            {
               if(j<n-i-1)
                 System.out.print(" ");
                else
                {
                    System.out.print(+ k);
                    if(j<(n-1))
                        k++;

                    else
                        k--;
                }
            }
            System.out.println(" ");
        }
        }


}
```

```
enter no.of rows
4
   1
  121
 12321
1234321

Process finished.
```