Pattern programming Assignment Questions

Assignment Questions

1. Write a Program (WAP) to print Alphabets A, B, C, D, E, F, $, H using pattern programming logic.

**public class PrintAlphabets {**

**public static void main(String[] args) {**

**// Print the letter A**

**for (int i = 1; i <= 7; i++) {**

**for (int j = 1; j <= 7; j++) {**

**if ((j == 1 && i != 1) || (j == 7 && i != 1) || (i == 1 && j > 1 && j < 7) || (i == 4 && j > 1 && j < 7)) {**

**System.out.print("A");**

**} else {**

**System.out.print(" ");**

**}**

**}**

**System.out.println();**

**}**

**// Print the letter B**

**for (int i = 1; i <= 7; i++) {**

**for (int j = 1; j <= 7; j++) {**

**if ((j == 1) || (i == 1 || i == 4 || i == 7) && j < 6 || (i == 2 || i == 3) && j == 6 || (i == 5 || i == 6) && j == 6) {**

**System.out.print("B");**

**} else {**

**System.out.print(" ");**

**}**

**}**

**System.out.println();**

**}**

**// Print the letter C**

**for (int i = 1; i <= 7; i++) {**

**for (int j = 1; j <= 7; j++) {**

**if ((j == 1 && i != 1 && i != 7) || (i == 1 && j > 1 && j < 7) || (i == 7 && j > 1 && j < 6) || (j == 6 && i > 1 && i < 7)) {**

**System.out.print("C");**

**} else {**

**System.out.print(" ");**

**}**

**}**

**System.out.println();**

**}**

**// Print the letter D**

**for (int i = 1; i <= 7; i++) {**

**for (int j = 1; j <= 7; j++) {**

**if ((j == 1) || (i == 1 || i == 7) && j < 6 || (i == 2 || i == 6) && j == 6 || (i == 3 || i == 4 || i == 5) && j == 7) {**

**System.out.print("D");**

**} else {**

**System.out.print(" ");**

**}**

**}**

**System.out.println();**

**}**

**// Print the letter E**

**for (int i = 1; i <= 7; i++) {**

**for (int j = 1; j <= 7; j++) {**

**if ((j == 1) || (i == 1 || i == 4 || i == 7) && j < 7) {**

**System.out.print("E");**

**} else {**

**System.out.print(" ");**

**}**

**}**

**System.out.println();**

**}**

**// Print the letter F**

**for (int i = 1; i <= 7; i++) {**

**for (int j = 1; j <= 7; j++) {**

**if ((j == 1) || (i == 1 || i == 4) && j < 7) {**

**System.out.print("F");**

**}**

//Print the letter G

for(int i=0;i<7;i++) {

for(int j=0;j<7;j++) {

if((j==0||j==6)&&(i>0&&i<6) || (i==0||i==6)&&(j>0&&j<6) || (i==4&&j>1&&j<6) || (i==3&&j==5) || (i==5&&j==1)) {

System.out.print("\*");

}

else {

System.out.print(" ");

}

}

System.out.println();

}

//Print the letter H

for(int i=0;i<7;i++) {

for(int j=0;j<5;j++) {

if((j==0||j==4)||(i==3)) {

System.out.print("\*");

}

else {

System.out.print(" ");

}

}

System.out.println();

}

2. Write a program to print triangle using star pattern programming logic  public class Triangle { public static void main(String[] args) { Scanner sc = new Scanner(System.in); System.out.println(“Enter the the size of the triangle”); int n=sc.nextInt(); for (int i = 1; i <= n; ++i) { for (int j = 1; j <= i; ++j) { System.out.print("\* "); } System.out.println(); } } }

3. WAP to print

int k=7,m=-2;

for(int i=0;i<7;i++){

for(int j=0;j<7;j++){

if(j<k){

System.out.print("\*");

}else{

System.out.print(" ");

}

}

for(int j=0;j<7;j++){

if(j>m){

System.out.print("\*");

}else{

System.out.print(" ");

}

}

System.out.println();

k--;m++;

}

for(int i=0;i<7;i++){

for(int j=0;j<14;j++){

if(j==0||j==13||i==6){

System.out.print("\*");

}else{

System.out.print(" ");

}

}System.out.println();

4. Write a program to print PW SKILLS using pattern programming logic.

import java.util.\*;

import java.lang.Math;

public class Main

{

static int height = 5;

static int width = (2 \* height) - 1;

public static void main(String[] args) {

int i, j, half = height / 2, dummy = half;

int counter = height / 2;

for (i = 0; i < height; i++)

{

System.out.printf("\*");

for (j = 0; j < height; j++)

{

if ((i == 0 || i == height / 2)

&& j < height - 1)

System.out.printf("\*");

else if (i < height / 2

&& j == height - 1 && i != 0)

System.out.printf("\*");

else

System.out.printf(" ");

}

System.out.print(" ");

System.out.printf("\*");

for (j = 0; j <= height; j++)

{

if (j == height)

System.out.printf("\*");

else if ((i >= height / 2)

&& (j == counter

|| j == height - counter - 1))

System.out.printf("\*");

else

System.out.printf(" ");

}

if (i>= height / 2)

{

counter++;

}

for(j=0;j<=height;j++){

System.out.printf(" ");

}

for (j = 0; j < height; j++)

{

if ((i == 0 || i == height / 2

|| i == height - 1))

System.out.printf("\*");

else if (i < height / 2

&& j == 0)

System.out.printf("\*");

else if (i > height / 2

&& j == height - 1)

System.out.printf("\*");

else

System.out.printf(" ");

}

System.out.print(" ");

System.out.printf("\*");

for (j = 0; j <= half; j++)

{

if (j == Math.abs(dummy))

System.out.printf("\*");

else

System.out.printf(" ");

}

dummy--;

System.out.print(" ");

for (j = 0; j < height; j++)

{

if (i == 0 || i == height - 1)

System.out.printf("\*");

else if (j == height / 2)

System.out.printf("\*");

else

System.out.printf(" ");

}

System.out.print(" ");

System.out.printf("\*");

for (j = 0; j <= height; j++)

{

if (i == height - 1)

System.out.printf("\*");

else

System.out.printf(" ");

}

System.out.print(" ");

System.out.printf("\*");

for (j = 0; j <= height; j++)

{

if (i == height - 1)

System.out.printf("\*");

else

System.out.printf(" ");

}

System.out.print(" ");

for (j = 0; j < height; j++)

{

if ((i == 0 || i == height / 2

|| i == height - 1))

System.out.printf("\*");

else if (i < height / 2

&& j == 0)

System.out.printf("\*");

else if (i > height / 2

&& j == height - 1)

System.out.printf("\*");

else

System.out.printf(" ");

}

System.out.printf("\n");

}

}

}

5. Write a program to print your Full Name using pattern programming logic

import java.util.\*;

import java.lang.Math;

public class Main

{

static int height = 5;

static int width = (2 \* height) - 1;

public static void main(String[] args) {

int i, j, half = height / 2, dummy = half;

int counter = height / 2;

int counter2=0;

int n = width / 2;

for (i = 0; i < height; i++)

{

System.out.printf("\*");

for (j = 0; j < width; j++)

{

if ((i == 0 || i == height - 1 || i == half)

&& j < (width - 2))

System.out.printf("\*");

else if (j == (width - 2)

&& !(i == 0 || i == height - 1

|| i == half))

System.out.printf("\*");

else

System.out.printf(" ");

}System.out.print(" ");

System.out.printf("\*");

for (j = 0; j < height; j++)

{

if ((j == height - 1)

|| (i == height / 2))

System.out.printf("\*");

else

System.out.printf(" ");

}

System.out.print(" ");

for (j = 0; j <= width; j++)

{

if (j == n || j == (width - n)

|| (i == height / 2 && j > n

&& j < (width - n)))

System.out.printf("\*");

else

System.out.printf(" ");

} n--;

System.out.print(" ");

System.out.printf("\*");

for (j = 0; j <= height; j++)

{

if (j == height)

System.out.printf("\*");

else if (j == counter2)

System.out.printf("\*");

else

System.out.printf(" ");

}

counter2++;

System.out.print(" ");

if (i != 0 && i != height - 1)

System.out.printf("\*");

else

System.out.printf(" ");

for (j = 0; j < height; j++)

{

if (((i == height - 1)

&& j >= 0

&& j < height - 1))

System.out.printf("\*");

else if (j == height - 1 && i != 0

&& i != height - 1)

System.out.printf("\*");

else

System.out.printf(" ");

}

System.out.printf("\n");

}

}

}