***Algorithms And flow chart for pattern:***

**1 Star pattern :**

****

**Algorithm:**

1 start the program

2 declare integer variables a and b

3 input the number of rows, store it in a

4 b=a

5 initilaize int i= 1 and int j=1 and int k=1

6 repeat steps 6 to 12 until i<=a

7 repeat steps 7 to 8 until j<=b

8 print a space

9 repeat steps 9 to 10 until k<=2\*i-1

10 print \*

11 b—

12 go to next line

13 stop

Input int n

Start

Input n as int

I++

For(i=1;i,=n)

For(int space=1;space,=n-1)

Space++

Print blank space

For(k=0;k!=2i-1)

K++

END

Print\* & new line

**2 Alphabet pattern:**

A

B B

C C C

D D D D

E E E E E

**Algorithm:**

1. Start
2. Let i be an integer number.
3. Let j be an integer number.
4. Repeat step 5 to 7 until all value parsed.
5. Set i = 0 and check i<4;
6. Set j = 0 and check j <= i;
7. Print char(65+i).
8. End.

Input char n,alphabet=’A’

start

Stop

Print new line

Alphabet++

Print aplphabet

For(int j=1;j<=i)

For(int i=1;i<=(n-‘a’+1))

Input last char to print

**3 NO. Pattern:**

1 2 3 4 5

1 2 3 4

1 2 3

1 2

1

**Algorithm**

1. Start
2. Let i be an integer number.
3. Let j be an integer number.
4. Let n be a integer number and initialize by 6.
5. Repeat step 6 to 8 until all value parsed.
6. Set i = n and check i>0;
7. Set j = 1 and check j <= i;
8. Print j values.
9. End

**4 Number pattern:**

**11111**

**11111**

**11111**

**Algorithm**

1 Start

2 declare integer variables rows, i=1, j=1

3 here we have to print 5 times ‘1’ in a row

4 repeat steps 4 to 7 until i>= rows

5 repeat steps 5 to 6 until j>=5

6 print 1

7 go to a new line

8 end

**5 Star pyramid :**

\*

\* \*

\* \* \*

**Algorithm:**

1 Start the program

2 Initialize an integer variable a=1and num

3 Ask the user to enter the number of rows they want store it in num variable.

4 repeat steps 4 to 10 until r<=num

5 initialize a variable int i=1

6 repeat the steps from 6 to 8 until i<=r

7 print \*

8 i++

9 go to next line

10 r++

11 stop

start

J=j+1

I=i+1

End

Print \*

For j,=n

For i<=n

Input n as an integer

Declare i.j and n as integer

false

true

false

true

**6 No pyramid**

1

2 3

4 5 6

7 8 9 10

**Algorithm:**

1: Start the program.

2: Initialize the integer n , number.

3: Input number of rows from user to print n as int.

4: Initialize variable i=1 as int.

5: Repeat step 4 to 11 until i<=n

6: Initialize variable j=1 as int.

7: Repeat step 6 to 9 until j<=i.

8: Print number.

9: number++.

10: j++.

11: Print new line.

12: i++;

13: Stop the program.