

CDAC-Mumbai

Subject: Pattern Challenge in Java

Date: 04-09-2024

Total Marks:10

Time duration: 40 Min.

Batch: August-24

Q1. Write a Java program to print a hollow pyramid pattern using asterisks (*) and spaces.

```
  *
 * *
*   *
 *   *
*     *
*****
```

Q2. Write a Java program to print a hollow inverted pyramid pattern using asterisks (*) and spaces.

```
*****
 *       *
 *       *
 *       *
 *       *
 *       *
```

Q3. Write a Java program to print a pyramid pattern of alphabets, starting from 'A', using spaces.

```
  A
 BCD
EFGHI
JKLMNOP
QRSTUVWXYZ
```

Q4. Write a Java program to print a hollow right triangle pattern using numbers and spaces.

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Q5. Write a Java program to print a Palindrome Number Pyramid.

```
  1
 1 2 1
1 2 3 2 1
1 2 3 4 3 2 1
1 2 3 4 5 4 3 2 1
```

Q6. Write a Java program to print a diamond pattern using numbers.

```
1
121
12321
1234321
12321
121
1
```

Q7. Write a Java program to print the following pattern using numbers.

```
1      1
12     21
123    321
1234   4321
12345  54321
```

Q8. Write a Java program to print the following pattern using numbers.

```
0
505
45054
3450543
234505432
12345054321
```

Q9. Write a Java program to print the following pattern using numbers.

```
1 x 8 + 1 = 9
12 x 8 + 2 = 98
123 x 8 + 3 = 987
1234 x 8 + 4 = 9876
12345 x 8 + 5 = 98765
123456 x 8 + 6 = 987654
1234567 x 8 + 7 = 9876543
12345678 x 8 + 8 = 98765432
123456789 x 8 + 9 = 987654321
```

Q10. Write a Java program to print the following pattern using numbers.

```
1
2 4
3 6 9
4 8 12 16
5 10 15
6 12
7
```