## Question 01

1. What is the feature?

    It's a daily streak button.

2. How does it work?

    When a user logs in daily, the streak increases and it's shown in the profile. If the streak breaks, the streak number resets. So in that case users can pay several amounts to keep streak numbers not resetting.

3. How does it promote user engagement and interaction?

    So with this feature users will try to log in daily. So vice versa user engagement increases.

## Question 02

```
package Ogilvy_SE_Test;

import java.util.Arrays;

public class Question_02 {

    public static void main(String[] args) {
        int[] input_list = {30,40,10,40,20};
        int result;
        result=find_second_largest(input_list);
        System.out.println(result);
    }

    private static int find_second_largest(int[] inputList) {

        //Sorting the array into the descending order
        for(int j=0; j<inputList.length;j++) {
            for (int i = 0; i < inputList.length-1; i++) {
                if (inputList[i] < inputList[i + 1]) {
                    int temp = inputList[i];
                    inputList[i] = inputList[i + 1];
                    inputList[i + 1] = temp;
                }
            }
        }

        //Checking and removing duplicates
        int index = 0;
```

```
        for (int i = 1; i < inputList.length; i++) {
            if (inputList[i-1] != inputList[i]){
                inputList[index]=inputList[i-1];
                index++;
            }
        }

        //returning the second-largest number which contains in
index 1;
        return inputList[1];
    }
}
```

## Question 03

```
package Ogilvy_SE_Test;

public class Question_03 {

    public static void main(String[] args) {

        String input = "Hello World";

        int result;
        result = vowelCount(input);
        System.out.println(result);
    }

    private static int vowelCount(String input) {
        char[] charArray = input.toCharArray();

        //iterating through the array while counting how many
vowels are there
        int count =0;
        for(int i=0;i<charArray.length;i++){

if(charArray[i]=='a'||charArray[i]=='e'||charArray[i]=='o'||charAr
ray[i]=='u'||charArray[i]=='i'){
                count++;
            }
        }

        return count;
    }
}
```

## Question 04

```
package Ogilvy_SE_Test;

import java.util.*;

public class Question_04 {
    public static void main(String[] args) {

        String input = "A man a plan a canal Panama";

        boolean result;
        result = is_palindrome(input);
        System.out.println(result);
    }

    private static boolean is_palindrome(String input) {

        //Removing blank spaces
        String in = input.replaceAll("\\s", "");

        //Converting to the lower cases
        String lowerCase = in.toLowerCase();

        //creating an array and putting string into the array
        String lowerCaseReversed;
        char [] lowerCaseArray = lowerCase.toCharArray();

        //creating array for the reversed string and reversing the
array
        char [] loweCaseReversedArray = new
char[lowerCaseArray.length];
        for(int i=0; i<loweCaseReversedArray.length;i++ ){
            loweCaseReversedArray[i] =
lowerCaseArray[lowerCaseArray.length-1-i];
        }

        //comparing two arrays and return the boolean value
        boolean isPalindrome =
Arrays.equals(lowerCaseArray,loweCaseReversedArray);
        return isPalindrome;
    }
}
```

## Question 05

```
package Ogilvy_SE_Test;

import java.util.ArrayList;

public class Question_05 {
    public static void main(String[] args) {

        int [] inputArray = {1, 2, 3, 4, 5, 6};
        ArrayList<Integer> results =
filterEvenNumbers(inputArray);
        System.out.println(results);

    }

    private static ArrayList<Integer> filterEvenNumbers(int[]
inputArray) {

        //Creating an ArrayList instead of an array because we
don't know about how many even numbers containing
        ArrayList<Integer> evenArray = new ArrayList<Integer>();

        //Iterating through the array and adding even numbers to
the arraylist
        for (int i=0; i<inputArray.length;i++) {
            if(inputArray[i]%2==0){
                evenArray.add(inputArray[i]);
            }
        }
        return evenArray;
    }
}
```

## Question 06

```
package Ogilvy_SE_Test;

import java.util.Random;
import java.util.Scanner;

public class Question_06 {

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

```
        while (true) {

            System.out.println("Guess What I'm Thinking");

            Scanner Input = new Scanner(System.in);
            System.out.println("Enter a number between 01 and 10!
(For exit enter 100)");

            int numberInput = Input.nextInt();

            Random Think = new Random();
            int thinkingNumber = Think.nextInt(10);

            if (numberInput == thinkingNumber) {
                System.out.println("We got a winner!");
                System.out.println();
            } else if (numberInput == 100){
                break;
            }else{
                System.out.println("Bad luck! Try Again, What I'm
thinking was " + thinkingNumber);
                System.out.println();
            }
        }
    }
}
```