Java Methods

Assignment Solutions

PW SKILLS

Q1 - Write a Java method to compute the average of three numbers

Input:
25
45
65

Expected Output:
45

Code:

```
import java.util.Scanner;
public class Test{
   public static void main(String[] args){
       Scanner scn = new Scanner(System.in);
       System.out.println("Enter the three numbers: ");
       int a = scn.nextInt();
       int b = scn.nextInt();
       int c = scn.nextInt();
   System.out.print(avg(a, b, c));
   }
   public static int avg(int a, int b, int c){
       return (a+b+c)/3;
   }
}
```

```
25
45
65
45
Process finished with exit code 0
```

Q2 - Write a Java method to count all vowels in a string

Input: (consists of all lowercase letters)
coding

Output:
2

Expected Code:

```
import java.util.Scanner;
public class Test{
   public static void main(String[] args){
       Scanner scn = new Scanner(System.in);
       System.out.println("Enter the string: ");
       String s = scn.nextLine();
   System.out.print(count(s));
   }
   public static int count(String s){
       int count = 0;
       for(int i = 0; i < s.length(); i++){
           char ch = s.charAt(i);
           if(ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u'){
               count++;
           }
       }
       return count;
   }
}
```

```
coding
2
Process finished with exit code 0
```

Q3 - Write a Java method to display the middle character of a string.
Note: a) If the length of the string is even there will be two middle characters.
b) If the length of the string is odd there will be one middle character.

Input:
350

Output:
5

Expected Code:

```
import java.util.Scanner;
public class Test{
   public static void main(String[] args){
       Scanner scn = new Scanner(System.in);
       System.out.println("Enter the string: ");
       String s = scn.nextLine();
   System.out.print(middle(s));
   }
   public static String middle(String s){
       if(s.length() % 2 == 0){
           return s.substring(s.length()/2, s.length()/2 + 2);
       }else{
           return s.substring(s.length()/2, s.length()/2 + 1);
       }
   }
}
```

```
350
5
Process finished with exit code 0
```

Q4 - Write a Java method to check whether a year (integer) entered by the user is a leap year or not.

Input:
2017

Output:
False

Expected Code:

```
import java.util.Scanner;
public class Test{
   public static void main(String[] args){
       Scanner scn = new Scanner(System.in);
       System.out.println("Enter the year: ");
       int year = scn.nextInt();
   System.out.print(is_LeapYear(year));
   }
   public static boolean is_LeapYear(int y){
//year is leap if it is perfectly divisible by 4, then by 100, then by 400, if not at any step, it is not a leap year
       boolean a = (y % 4) == 0;
       boolean b = (y % 100) ≠ 0;
       boolean c = ((y % 100 == 0) && (y % 400 == 0));
       return a && (b || c);
   }
}
```

```
2017
false
Process finished with exit code 0
```

Q5 - Write a Java method to find the smallest number among three numbers.

Input:
25
37
29

Output:
25

Code:

```
import java.util.Scanner;
public class Test{
   public static void main(String[] args){
       Scanner scn = new Scanner(System.in);
       System.out.println("Enter the three numbers: ");
       int a = scn.nextInt();
       int b = scn.nextInt();
       int c = scn.nextInt();
   System.out.print(smallest(a, b, c));
   }
   public static int smallest(int a, int b, int c){
       return Math.min(a, Math.min(b,c));
   }
}
```

```
25
37
29
25
Process finished with exit code 0
```