LAB 1
Chapter 1. Introduction to Java and Eclipse

1. Install Eclipse

   https://www.tutorialspoint.com/eclipse/eclipse_installation.htm

2. Write a java program pirinting out: "Hello VKU freshmen!"

```java
1
2 public class DataPrinting {
3
4     public static void main(String[] args) {
5
6         System.out.println("Hello VKU freshmen");
7
8     }
9 }
```

3. Write a java application allowing user to input a byte number N (32≤ N ≤255) and printing out its corresponding character.

```java
1 import java.util.*;
2
3 public class Exercise2 {
4     public static void main(String[] args) {
5
6         byte ASCIIcode;
7         Scanner keyboard = new Scanner(System.in);
8         System.out.print("Input an ASCII code: ");
9         ASCIIcode = keyboard.nextByte();
10         System.out.println("ASCII code "+ ASCIIcode + " is " + (char)ASCIIcode);
11
12     }
13 }
14
```

```
Problems  @ Javadoc  Declaration  Console
<terminated> Exercise2 [Java Application] C:\Users\hcphap\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_16.0.2.v20210721-1149\jre\bin\javaw.exe  (13:44:25, 18 thg 9, 2021 – 13:44:28)
Input an ASCII code: 65
ASCII code 65 is A
```

4. Write a java application allowing user to input a character and printing out its corresponding ASCII code.

```java
1  import java.util.Scanner;
2  public class Exercise3 {
3    public static void main(String[] args) {
4        char ch;
5        Scanner keyboard = new Scanner(System.in);
6        System.out.print("Input a character: ");
7        ch = keyboard.next().charAt(0);
8        System.out.println("ASCII code of "+ ch + " is " + (byte)ch);
9    }
10 }
```

Problems @ Javadoc Declaration Console ⊠

\<terminated> Exercise3 [Java Application] C:\Users\hcphap\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_16.0.2.v20210721-1149\jre\bin\javaw.exe (13:57:16, 18 thg 9, 2021 – 13:57:20)

```
Input a character: a
ASCII code of a is 97
```

5. Write a java application allowing user to input two integer numbers (*a* and *b*) then print out results of the following expressions: a+b; a-b; a*b; a/b; a%b

```java
1  import java.util.*;
2  public class Exercise4 {
3    public static void main(String[] args) {
4        Scanner k=new Scanner(System.in);
5        System.out.println("Input two int numbers: ");
6        int a=k.nextInt();
7        int b=k.nextInt();
8        System.out.println(a+" + "+b+" = "+(a+b));
9        System.out.println(a+" - "+b+" = "+(a-b));
10       System.out.println(a+" x "+b+" = "+a*b);
11       System.out.println(a+" / "+b+" = "+a/b);
12       System.out.println(a+" mod "+b+" = "+a%b);
13   }
14 }
```

Problems @ Javadoc Declaration Console ⊠

\<terminated> Exercise4 [Java Application] C:\Users\hcphap\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_16.0.2.v20210721-1149

```
Input two int numbers:
3
6
3 + 6 = 9
3 - 6 = -3
3 x 6 = 18
3 / 6 = 0
3 mod 6 = 3
```

6. Write a java program allowing user to input a circle radius and calculating the circle's area and perimeter.

```java
1  import java.util.Scanner;
2  public class Exercise5 {
3
4⊖   public static void main(String[] args) {
5       double r;
6       final float pi=3.1415f;
7       Scanner k=new Scanner(System.in);
8       System.out.print("Input radius r= ");
9       r=k.nextDouble();
10      System.out.println("Circle area =  "+r*r*pi);
11      System.out.println("Circle perimeter =  "+2*r*pi);
12      }
13 }
```

Problems @ Javadoc Declaration Console ☒

<terminated> Exercise5 [Java Application] C:\Users\hcphap\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_16.0.2.v20210721-1

```
Input radius r= 5
Circle area =  78.53749990463257
Circle perimeter =  31.414999961853027
```

DO IT YOURSELF

7. Write a java application allowing user to input a number (n) then print out results of the following expressions: sin(n), cos(n), $\sqrt{n}$

   Hint: Use the Math class

8. Write a java application allowing user to input a string and printing out the number of characters of the given string.

   Hint: Use the String class and length method

9. Write a java program allowing user to input width and high of a rectangle and calculating the rectangle's area and perimeter.

10. Explorer the online document
    https://www.codecademy.com/learn/learn-java