FARICHA AULIA

JOBSHEET 6

Experiment 1

1. Add Scanner library, Scanner declaration!
   Create a value variable that has an int data type to accommodate the data inputted via the keyboard

In [1]:
```
// Type the program code above, below (below this sentence)
import java.util.Scanner;
Scanner input = new Scanner(System.in);
int score;
System.out.print("Enter the test score (0-100:) ");
score = input.nextInt();
```

```
Enter the test score (0-100:) 85
```

2. Create a nested condition checking structure. The first check is used to ensure that the value entered is in the range 0-100. If the value is in the range 0-100, a student's graduation status will be checked, i.e. if the score is between 90-100 then the value is A, if the score is between 80 – 89 then the value is B, if the value is between 60 – 79 then the value is C, if the value is between 50 – 59 then the value is D, and if the value is between 0 – 49 then the value is E. Meanwhile, if the value is outside the range 0 – 100 , it displays information that the entered value is invalid.

In [2]:
```
// Type the program code above, below (below this sentence)
if(score >= 0 && score <= 100){
    if(score >= 90 && score <= 100){
        System.out.println("Grade A, EXCELLENT!");
    } else if(score >= 80 && score <= 89){
        System.out.println("Grade B, Keep your achievements!");
    } else if(score >= 60 && score <= 79){
        System.out.println("Grade C, Improve your achievements!");
    } else if(score >= 50 && score <= 59){
        System.out.println("Grade D, Improve your learning!");
    } else {
        System.out.println("Grade E, You didn't pass!");
    }
} else {
     System.out.println("The value you have entered is not valid");
}
```

```
Grade B, Keep your achievements!
```

Question

In [2]:
```
//Answers of Questions
import java.util.Scanner;
Scanner input = new Scanner(System.in);
int score;
System.out.print("Enter the test score (0-100:) ");
score = input.nextInt();
System.out.println ("\t");
System.out.println ("Question Number 1 ");
if(score < 0){
System.out.println("The value you entered is less than 0");
} else if (score >= 100){
System.out.println("The value you entered is more than 100");}
System.out.println ("\t");
System.out.println ("Question Number 2 ");
System.out.println("We use the code to && if there are 2 conditions entered. If one of the conditions is true then the other conc
System.out.println ("\t");
System.out.println ("Question Number 3 ");
System.out.println ("we use // if the condition entered is 2. But it only depends on one of the conditions. If one of these condi
```

```
Enter the test score (0-100:) 105

Question Number 1
The value you entered is more than 100

Question Number 2
We use the code to && if there are 2 conditions entered. If one of the conditions is true then the other conditions are also tr
ue, and vice versa

Question Number 3
we use // if the condition entered is 2. But it only depends on one of the conditions. If one of these conditions is true / fal
se then it will not affect the other conditions
```

Experiment 2

1. The flowchart is used to calculate a person's net salary after deducting taxes according to the category (workers and business people) and the amount of salary. Add Scanner library and Scanner declaration. Declare categorical variables, salary, net salary, and taxes

In [3]:
```
// Type the program code above, below (below this sentence)
import java.util.Scanner;
Scanner input = new Scanner(System.in);
String category;
int salary,netSalary;
double tax = 0;

System.out.print("Enter salary category : ");
category = input.nextLine();
System.out.print("Enter the amount of salary : ");
salary = input.nextInt();
```

```
Enter salary category : workers
Enter the amount of salary : 2000000
```

2. Create a nested condition checking structure. The first check is used to check the category (worker or business people). Next, a second check is carried out to determine the amount of tax based on the salary that has been entered. Then add the program code to calculate the net salary received after tax!

In [6]:
```
// Type the program code above, below (below this sentence)
if(category.equalsIgnoreCase ("Workers")){
    if(salary <= 2000000){
        tax = 0.1;
    } else if(salary <= 3000000){
        tax = 0.15;
    } else {
        tax = 0.2;
    }
    netSalary = (int) (salary * tax);
    System.out.println("Your net salary : " + netSalary);
} else if(category.equalsIgnoreCase ("Bussiness People")){
    if(salary <= 2500000){
        tax = 0.15;
    } else if(salary <= 3500000){
        tax = 0.2;
    } else {
        tax = 0.25;
    }
    netSalary = (int) (salary * tax);
    System.out.println("Your net salary : " + netSalary);
} else {
    System.out.println("Your category you have entered is incorrect");
}
```

Question

In [1]:
```
//Answers of Questions
System.out.println ("\t");
System.out.println ("Question Number 1 ");
System.out.println("Because there is an integer so there can't be a comma");
System.out.println ("\t");
System.out.println ("Question Number 2 ");
System.out.println("so that the output does not have commas");
System.out.println ("\t");
System.out.println ("Question Number 3 ");
System.out.println("If the input uses a capital letter / not then it can still be read by the program");
System.out.println ("\t");
System.out.println ("Question Number 4 ");
System.out.println("so that the results match the previously inputted data");
```

```
Question Number 1
Because there is an integer so there can't be a comma

Question Number 2
so that the output does not have commas

Question Number 3
If the input uses a capital letter / not then it can still be read by the program

Question Number 4
so that the results match the previously inputted data
```

Task

1. Make a simple calculator program using the Java programming language. The user will input two real numbers and one arithmetic operator (+, -, *, or /), then the program will operate the two numbers with the appropriate operator. Hint: use switch-case statements. Example program display: Enter the first number: 2.5 || Enter operators (+, -, *, /): * || Enter the second number: 4 || 2.5 * 4.0 = 10.0

In [3]:
```
//type the program code and attach the result here
import java.util.Scanner;
Scanner sc = new Scanner (System.in);
double number1, number2, result;
char operator;

System.out.print("Enter your first number : ");
number1 = sc.nextDouble();
System.out.print("Enter your second number : ");
number2 = sc.nextDouble();
System.out.print("Enter your operator (+ - * /) : ");
operator = sc.next().charAt(0);

switch(operator){
        case'+':
        result = number1 + number2;
        System.out.println(number1 + " + " + number2 + " = " + result);
        break;
        case'-':
        result = number1 - number2;
        System.out.println(number1 + " - " + number2 + " = " + result);
        break;
        case'*':
        result = number1 * number2;
        System.out.println(number1 + " * " + number2 + " = " + result);
        break;
        case'/':
        result = number1 / number2;
        System.out.println(number1 + " / " + number2 + " = " + result);
        break;
        default:
        System.out.println("Wrong operator!");
}
```

```
Enter your first number : 2.5
Enter your second number : 4
Enter your operator (+ - * /) : *
2.5 * 4.0 = 10.0
```

2. Using three values that represent the lengths of the three sides of a triangle, determine whether the triangle is equilateral (all three sides are equal), isosceles (both sides are equal), or arbitrary (no sides are equal)!

In [2]:
```
//type the program code and attach the result here
import java.util.Scanner;

Scanner input = new Scanner(System.in);
float sideA, sideB, sideC;
System.out.println("Enter your first number :");
sideA = input.nextFloat();
System.out.println("Enter your second number :");
sideB = input.nextFloat();
System.out.println("Enter your third number :");
sideC = input.nextFloat();

if(sideA == sideB && sideA == sideC){
System.out.println("Triangle equilateral");
} else if(sideA == sideB || sideB == sideC || sideC == sideA){
System.out.println("Triangle isosceles");
} else {
System.out.println("Triangle arbritary");
}
}
```

```
Enter your first number :
4
Enter your second number :
5
Enter your third number :
4
Triangle isosceles
```

3. Warung Padang Gembira asks you to create a program to receive orders from the internet. The program you created asks the user to enter the name of the food and the price. After that, the user is offered to use express delivery. If the user refuses, then the type of delivery used is regular delivery. The regular delivery fee for food prices less than IDR 100,000 is IDR 20,000, while for food prices equal to or more than IDR 100,000 the delivery fee is IDR 30,000. For express delivery, add an additional fee of IDR 25,000 from the standard regular shipping fee. Show receipts containing the name of the food purchased + price, delivery fee and total to be paid!

In [1]:
```
//type the program code and attach the result here
import java.util.Scanner;
Scanner input = new Scanner(System.in);
String foodN;
int foodP, total, express;
System.out.print("Enter the food name: ");
foodN = input.nextLine();
System.out.print("Enter the food price: IDR ");
foodP = input.nextInt();
System.out.print("Do you want express delievery (0 = no, 1 = yes)? ");
express = input.nextInt();
switch(express){
    case 0:
        total = foodP + 30000;
        System.out.println("RECEIPT");
        System.out.println(foodN + " IDR " + foodP);
        System.out.println("Shipping fee IDR 30000");
        System.out.println("TOTAL IDR " + total );
        break;
    case 1:
        total = foodP + 55000;
        System.out.println("RECEIPT");
        System.out.println(foodN + " IDR " + foodP);
        System.out.println("Shipping fee IDR 55000");
        System.out.println("TOTAL IDR " + total );
        break;
}
```

```
Enter the food name: Chocolate Cake
Enter the food price: IDR 15000
Do you want express delievery (0 = no, 1 = yes)? 0
RECEIPT
Chocolate Cake IDR 15000
Shipping fee IDR 30000
TOTAL IDR 45000
```

4. Make a program according to the flowchart above!

In [1]:
```
//type the program code and attach the result here
java.util.Scanner sc = new java.util.Scanner(System.in);
int age;
double monthIn, numDependent, costL;
String workStatus, schoolStatus;
System.out.print("How old are you? ");
age = sc.nextInt();
if(age >= 18){
    sc.nextLine();
    System.out.print("Have you worked? (yes or no): ");
    workStatus = sc.nextLine();
    if(workStatus.equalsIgnoreCase("Yes")){
        System.out.print("Enter the monthly income      : ");
        monthIn = sc.nextDouble();
        System.out.print("Enter the number of dependents : ");
        numDependent = sc.nextDouble();
        costL = monthIn/numDependent;
        System.out.println("Cost of Living : " + costL);
        if(costL <= 300000){
           System.out.println("Poor People");
        }else{
            System.out.println("Not Poor People");
        }
    }else if(workStatus.equalsIgnoreCase("No")){
        System.out.println("Poor People");
    }else{
        System.out.println("Wrong Input!");
    }
}else{
    sc.nextLine();
    System.out.print("Are you a student? (yes or no): ");
    schoolStatus = sc.nextLine();
    if(schoolStatus.equalsIgnoreCase("Yes")){
        System.out.println("Not Poor People");
    }else if(schoolStatus.equalsIgnoreCase("No")){
        System.out.println("Poor People");
    }else{
        System.out.println("Wrong Input!");
    }
}
```

```
How old are you? 18
Have you worked? (yes or no): no
Poor People
```

Table

Line	Program

1-33	public class SelTask2{
	public static void main(String []args){
	Scanner sc = new Scanner (System.in);
	double number1, number2, result;
	char operator;
	
	System.out.print("Enter your first number : ");
	number1 = sc.nextDouble();
	System.out.print("Enter your second number : ");
	number2 = sc.nextDouble();
	System.out.print("Enter your operator (+ - * /) : ");
	operator = sc.next().charAt(0);
	
	switch(operator){
	case'+':
	result = number1 + number2;
	System.out.println(number1 + " + " + number2 + " = " + hasil);
	break;
	case'-':
	result = number1 - number2;
	System.out.println(number1 + " - " + number2 + " = " + hasil);
	break;
	case'*':
	result = number1 * number2;
	System.out.println(number1 + " * " + number2 + " = " + hasil);
	break;
	case'/':
	result = number1 / number2;
	System.out.println(number1 + " / " + number2 + " = " + hasil);
	break;
	default:
	System.out.println("Wrong operator!);
	}

37-53	Scanner input = new Scanner(System.in);
	float sideA, sideB, sideC;
	System.out.println("Enter your first number :");
	sideA = input.nextFloat();
	System.out.println("Enter your second number :");
	sideB = input.nextFloat();
	System.out.println("Enter your third number :");
	sideC = input.nextFloat();

	if(sideA == sideB && sideA == sideC){
	System.out.println("Triangle equilateral");
	} else if(sideA == sideB || sideB == sideC || sideC == sideA){
	System.out.println("Triangle isosceles");
	} else {
	System.out.println("Triangle arbritary");
	}
	}

52-79	import java.util.Scanner;
	Scanner input = new Scanner(System.in);
	String foodN;
	int foodP, total, express;
	System.out.print("Enter the food name: ");
	foodN = input.nextLine();
	System.out.print("Enter the food price: IDR ");
	foodP = input.nextInt();
	System.out.print("Do you want express delievery (0 = no, 1 = yes)? ");
	express = input.nextInt();
	switch(express){
	case 0:
	total = foodP + 30000;
	System.out.println("RECEIPT");
	System.out.println(foodN + " IDR " + foodP);
	System.out.println("Shipping fee IDR 30000");
	System.out.println("TOTAL IDR " + total);
	break;
	case 1:
	total = foodP + 55000;
	System.out.println("RECEIPT");
	System.out.println(foodN + " IDR " + foodP);
	System.out.println("Shipping fee IDR 55000");
	System.out.println("TOTAL IDR " + total);
	break;
	}

80-119	java.util.Scanner sc = new java.util.Scanner(System.in);
	int age;
	double monthIn, numDependent, costL;
	String workStatus, schoolStatus;
	System.out.print("How old are you? ");
	age = sc.nextInt();
	if(age >= 18){
	sc.nextLine();
	System.out.print("Have you worked? (yes or no): ");
	workStatus = sc.nextLine();
	if(workStatus.equalsIgnoreCase("Yes")){

```
        System.out.print("Enter the monthly income       : ");
        monthIn = sc.nextDouble();
        System.out.print("Enter the number of dependents : ");
        numDependent = sc.nextDouble();
        costL = monthIn/numDependent;
        System.out.println("Cost of Living : " + costL);
        if(costL <= 300000){
          System.out.println("Poor People");
        }else{
           System.out.println("Not Poor People");
        }
    }else if(workStatus.equalsIgnoreCase("No")){
        System.out.println("Poor People");
    }else{
        System.out.println("Wrong Input!");
    }
}else{
    sc.nextLine();
    System.out.print("Are you a student? (yes or no): ");
    schoolStatus = sc.nextLine();
    if(schoolStatus.equalsIgnoreCase("Yes")){
        System.out.println("Not Poor People");
    }else if(schoolStatus.equalsIgnoreCase("No")){
        System.out.println("Poor People");
    }else{
        System.out.println("Wrong Input!");
    }
}
```