

## D.M.D.T DISSANAYAKE

### ICM-102

### ASSIGNMENT NUMBER 6(Course Work)

```
import java.util.*;
class Assignment6 {
    public final static void clearConsole(){
        try{
            final String os=System.getProperty("os.name");
            if(os.contains("Windows")){
                new ProcessBuilder("cmd","/c","cls").inheritIO().start().waitFor();
            }else{
                System.out.print("\033[h\033[2j");
                System.out.flush();
            }
        }catch (final Exception e){
            e.printStackTrace();
        }
    }

    public static void getRentTax(double rentTax){
        if (rentTax>=100000.0){
            rentTax=rentTax*10/100;
            System.out.println("Your tax rent is      : "+rentTax);
        }else if(0.0<rentTax && rentTax<=100000.0){
            System.out.println("You don't have to pay tax rent");
        }else {
            System.out.println("Invalid input.....");
        }
    }

    public static void getBankInterest(double bankInterestTax){
        if(bankInterestTax>0){
            bankInterestTax=bankInterestTax*5/100;
            System.out.println("You have to pay Bank Interest Tax per year
: "+bankInterestTax);
        }else{
            System.out.println("Invalid output.....");
        }
    }

    public static void getDevidentTax(double devidentTax){
```

```

        if (devidentTax>=100000.0){
            devidentTax=devidentTax*14/100;
            System.out.println("You have to pay devident tax per year : "+devidentTax);
        }else if(0.0<devidentTax && devidentTax<=100000.0){
            System.out.println("You Don't have to pay devident tax ");
        }else{
            System.out.println("Invalid input.....");
        }
    }
}

public static double getPayableTax(double salary){
    double tax=0.0;
    if(salary>100000.0){
        if(salary<=141667.0){
            tax=(salary-100000.0)*0.06;
        }else if(salary<=183333.0){
            tax=2500.0+(salary-141667.0)*0.12;
        }else if(salary<=225000.0){
            tax=7500.0+(salary-183333.0)*0.18;
        }else if(salary<=266667.0){
            tax=15000.0+(salary-225000.0)*0.24;
        } else if (salary <= 308333) {
            tax = 25000 + (salary - 266667) * 0.30;
        } else{
            tax = 37500 + (salary - 308333) * 0.36;
        }
        tax=Math.round(tax);
    }
    return tax;
}

public static double getIncomeTax(double income){
    double tax=0.0;
    if (income <= 1700000) {
        tax = (income - 1200000) * 0.06;
    } else if (income <= 2200000) {
        tax = 30000 + (income - 1700000) * 0.12;
    } else if (income <= 2700000) {
        tax = 90000 + (income - 2200000) * 0.18;
    } else if (income <= 3200000) {
        tax = 180000 + (income - 2700000) * 0.24;
    } else if (income <= 3700000) {
        tax = 300000 + (income - 3200000) * 0.30;
    } else {
        tax = 450000 + (income - 3700000) * 0.36;
    }
    tax=Math.round(tax);
}

```



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=====
;

    System.out.println();
    System.out.println("\t [1] Withholding Tax"   );
    System.out.println();
    System.out.println("\t [2] Payable Tax " );
    System.out.println();
    System.out.println("\t [3] Income Tax"   );
    System.out.println();
    System.out.println("\t [4] Social Security Contribution Levy(SSCL) Tax"   );
    System.out.println();
    System.out.println("\t [5] Leasing Payment "   );
    System.out.println();
    System.out.println("\t [6] Exit "   );
    System.out.println();
    System.out.println();
    System.out.print("Enter an option to continue : ");
    int option1=input.nextInt();
    switch(option1){
        case 1 :clearConsole();

System.out.println("+-----+");
                                System.out.println("| \t \t \t \t WITHHOLDING
TAX \t \t \t \t |");

System.out.println("+-----+");
                                System.out.println("\t \t [1] Rent tax");
                                System.out.println();
                                System.out.println("\t \t [2] Bank Interest Tax");
                                System.out.println();
                                System.out.println("\t \t [3] Divident Tax");
                                System.out.println();
                                System.out.println("\t \t [4] Exit ");
                                System.out.println();
                                System.out.print("Enter an option to continue -->");
                                int option2 = input.nextInt();
                                switch(option2){
                                    case 1: L1: do{clearConsole();

System.out.println("+-----+");

System.out.println("| \t \t \t \t RENT TAX \t \t \t \t |");

System.out.println("+-----+");

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        System.out.println();

        System.out.print("Enter your rent          : ");

rent=input.nextDouble();

        getRentTax(rent);

        System.out.println();

        System.out.println();

do{System.out.print("Do you want to   calculate another rent tax (Y/N) :");

        String str = input.next();

        if(str.equalsIgnoreCase("Y")){

            continue L1;

        }else if(str.equalsIgnoreCase("N")){

            continue La;

        }else{

            System.out.print("Invalid input.....");

            continue L2;

        }

}while(true);

                                }while(true);
                                case 2: L3:   do{clearConsole();

        System.out.println("-----+");

        System.out.println("| \t \t \t \t BANK INTEREST TAX \t \t \t \t |");

        System.out.println("-----+");

        System.out.println();

```

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        System.out.print("Enter your bank interest per year      : ");
                                                                    double
bankInterest=input.nextDouble();

        getBankInterest(bankInterest);

        System.out.println();

        System.out.println();

                                                                    L4:
do{System.out.print("Do you want to   calculate another bank interest tax (Y/N) :");

        String str = input.next();

        if(str.equalsIgnoreCase("Y")){

            continue L3;

        }else if(str.equalsIgnoreCase("N")){

            continue La;

        }else{

            System.out.print("Invalid input.....");

            continue L4;

        }

    }while(true);

                                                                    }while(true);
        case 3:L5: do{clearConsole();

        System.out.println("+-----+");

        System.out.println("|\\t\\t \\t\\tDEVIDENT TAX\\t\\t\\t\\t|");

        System.out.println("+-----+");

                                                                    System.out.println();
                                                                    System.out.print("Enter
your total devident per year      :" );

```

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double
devident=input.nextDouble();

getDevidentTax(devident);

System.out.println();
System.out.println();

L6:do{System.out.print("Do you want to calculate another devident tax (Y/N) :");
String str=input.next();

if(str.equalsIgnoreCase("Y")){
continue L5;
}else
if(str.equalsIgnoreCase("N")){
continue La;
}else{

System.out.println("Invalid input.....");

continue L6;
}
}while(true);

}while(true);
case 4: continue La;
}
case 2:L7: do{clearConsole();

System.out.println("-----");
System.out.println("|\\t\\t \\t\\tPAYABLE TAX\\t\\t\\t\\t|");

System.out.println("-----");
System.out.println();
System.out.print("Enter your employee payment for the
month : ");

double payment=input.nextDouble();
if (0.0<payment && payment<100000.0){
System.out.println("You Don't have to pay
payable tax....");

System.out.println();
}else if(payment<0.0){
System.out.println("Invalid input....");
System.out.println();
}else{
double printTax=getPayableTax(payment);

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per month : "+printTax);

                                System.out.println("You have to pay payable tax

                                System.out.println();
                                }
                                L8: do{System.out.print("Do you want to calculate

another payable tax (Y/N) :");

                                String str=input.next();
                                if(str.equalsIgnoreCase("Y")){
                                    continue L7;
                                }else if(str.equalsIgnoreCase("N")){
                                    continue La;
                                }else{
                                    continue L8;
                                }
                                }while(true);

                                }while(true);
                                case 3:L9: do{clearConsole();

                                System.out.println("+-----+");
                                System.out.println("| \t \t \t \t INCOME TAX \t \t \t \t |");

                                System.out.println("+-----+");

                                System.out.println();
                                System.out.print("Enter your total income per year : ");
                                double income=input.nextDouble();
                                if (0.0<income && income<1200000.0){
                                    System.out.println("You Don't have to pay

income tax per year....");

                                System.out.println();
                                }else if(income<0.0){
                                    System.out.println("Invalid input....");
                                    System.out.println();
                                }else{
                                    double printIncomeTax=getIncomeTax(income);
                                    System.out.println("You have to pay income tax

per year : "+printIncomeTax);

                                System.out.println();
                                }
                                L10: do{System.out.print("Do you want to calculate

another Income tax (Y/N) :");

                                String str=input.next();
                                if(str.equalsIgnoreCase("Y")){
                                    continue L9;

```



```

        }else if(str.equalsIgnoreCase("N")){
            continue La;
        }else{
            continue L10;
        }
    }while(true);

    }while(true);
    case 4: L11: do{clearConsole();

        System.out.println("-----");
        System.out.println("|\\t\\t SOCIAL SECURITY
CONTRIBUTION LEVY (SSCL) TAX\\t\\t|");

        System.out.println("-----");

        System.out.println();
        System.out.print("Enter value of good or
services : " );

        double value=input.nextDouble();
        getSSCL(value);
        L12: do{
            System.out.println();
            System.out.print("Do you want to calculate
another SSCL tax (Y/N) : " );

            String str = input.next();
            if(str.equalsIgnoreCase("Y")){
                continue L11;
            }else if(str.equalsIgnoreCase("N")){
                continue La;
            }else{
                continue L12;
            }
        }while(true);
    }while(true);
    case 5:clearConsole();

        System.out.println("-----");
        System.out.println("|\\t\\t\\t LEASING
PAYMENT\\t\\t\\t|");

        System.out.println("-----");

        System.out.println();
        System.out.println("\\t\\t[1] Calculate monthly
installment");

```

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category");

");

-->");

System.out.println();
System.out.println("\t\t[2] Search leasing

System.out.println();
System.out.println("\t\t[3] Find leasing amount

System.out.println();
System.out.println("\t\t[4] Exit ");
System.out.println();
System.out.print("Enter an option to continue

int option3=input.nextInt();
switch(option3){
    case 1:L12: do{clearConsole();

System.out.println("+-----+");

System.out.println("| \t \t CALCULATE MONTHLY INSTALLMENT \t \t \t |");

System.out.println("+-----+");

System.out.println();

System.out.print("Enter lease amount : ");

double
leaseAmount=input.nextDouble();

System.out.println();

System.out.print("Enter annual interest rate : ");

double
annualInterestRate=input.nextDouble();

System.out.println();

while(annualInterestRate>0){

int
years;

do{

System.out.print("Enter number of years : ");

years=input.nextInt();

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if(years>5){

System.out.println("\t\tInvalid number of years.....Enter the correct value");

}

}while(years>5);

int months=years*12;

double monthlyInterestRate=(annualInterestRate/100)/12;

double monthlyPayment =(leaseAmount * monthlyInterestRate) / (1 - (1 / Math.pow(1 +
monthlyInterestRate, months)));

monthlyPayment=Math.round(monthlyPayment*100.0)/100.0;

System.out.println("Your monthly installment is : "+monthlyPayment);

}
L13:do{

System.out.print("Do you want to calculate another monthly installement (Y/N) : ");

String
str=input.next();

if(str.equalsIgnoreCase("Y")){

continue L12;

}else

if(str.equalsIgnoreCase("N")){

continue La;

}else{

}

}while(true);

}while(true);
case 2:L14:do{

clearConsole();

```

```

System.out.println("-----+");

System.out.println("|\\t\\t \\tSERCHING LEASING CATOGORY\\t\\t\\t|");

System.out.println("-----+");

System.out.println();

System.out.print("Enter lease amount : ");

double
leaseAmount=input.nextDouble();

System.out.println();

System.out.print("Enter annual interest : ");

double
annualInterest=input.nextDouble();

System.out.println();

while(annualInterest>0){
    for (int
years = 3; years <=5; years++){

    int months=years*12;

    double monthlyInterestRate=(annualInterest/100)/12;

    double monthlyPayment =(leaseAmount * monthlyInterestRate) / (1 - (1 / Math.pow(1 +
monthlyInterestRate, months)));

    monthlyPayment=Math.round(monthlyPayment*100.0)/100.0;

    System.out.println("Your monthly installment is : "+monthlyPayment);
    }
}

System.out.println();

L15: do{

    System.out.print("Do you want to search another leasing category (Y/N) : ");

    String
str=input.next();

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        if(str.equalsIgnoreCase("Y")){

            continue L14;

        }else
if(str.equalsIgnoreCase("N")){

            continue La;

        }else{

            continue L15;

        }

    }while(true);

                                }while(true);
                                case 3:L16:do{clearConsole();

System.out.println("-----");

System.out.println("|\\t\\t \\tFIND LEASING AMOUNT\\t\\t\\t\\t|");

System.out.println("-----");

System.out.println();

System.out.print("Enter the monthly lease payment amount that you can afford : ");
                                double
affordableLease=input.nextDouble();

System.out.println();

System.out.print("Enter number of years : ");

                                int
years=input.nextInt();

System.out.println();

System.out.print("Enter annual interest rate : ");

                                double
annualInterest=input.nextDouble();

System.out.println();

```

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        if(annualInterest>0){
            months=years*12;
            monthlyInterestRate=(annualInterest/100.0)/12.0;
            totalLeaseAmount=affordableLease*(1-Math.pow(1+monthlyInterestRate,-months))/monthlyInterestRate;

            totalLeaseAmount=Math.round(totalLeaseAmount);

            System.out.println("You can get lease amount : "+totalLeaseAmount);

            System.out.println();
        }
        L17: do{
            System.out.print("Do you want to calculate another monthly installment (Y/N):");
            String str = input.next();

            if(str.equalsIgnoreCase("Y")){
                continue L16;
            }else
            if(str.equalsIgnoreCase("N")){
                continue La;
            } else{
                continue L17;
            }

        }while(true);

        }while(true);

        case 4:continue La;

        case 6: clearConsole();

```

```
    }  
    }while(true);  
}
```