Programme Name: **BCS HONS**

Course Code: **CSC 2515**

Course Name: **Object Oriented Programming**

Assignment / **Lab Sheet** / Project / Case Study No. **1**

Date of Submission: **11/25/2020**

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Semester**: Third Semester**

Intake**: September 2019**

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ans 1:

```
import java.util.Scanner;
public class LargestNumfinder{
public static void main(String[]args){
int a[]= new int(2);
Scanner s = new Scanner(System.in);
System.out.print("enter two numbers");
for(int i=0; i<a.length(); i++){
a = s.nextInt();
};
if(a[0]< a[1]){
System.out.print(a[1]);}

}}
```

ans 2:

```
import java.util.Scanner;
public class OddEvenNumfinder{
public static void main(String[]args){
```

```
Scanner sc =  new Scanner(System.in);
System.out.println("enter any number");
int  a = sc.nextInt();
if(a % 2 == 0){
System.out.println("even");}
else
System.out.println("odd");
}}
```

ans 3:

```
import java.util.Scanner;
public class Numfinder{
public static void main(String[]args){
Scanner sc =  new Scanner(System.in);
System.out.println("enter any number");
int  a = sc.nextInt();
if(a % 5== 0){
System.out.println("factor of 5 ");}
else
System.out.println("not divisible by 5");
}}
```

ans 4:

```
import java.util.Scanner;
```

```
public class Numfinder{
public static void main(String[]args){
Scanner sc =  new Scanner(System.in);
System.out.println("enter any number");
int  a = sc.nextInt();
if(a % 2 == 0 && a%5 == 0){
System.out.println("even and divisible by 5");}
else
System.out.println("may be odd and if not is a factor of 5");
}}
```

ans 5:

```
import java.util.Scanner;
public class CaseChecker{
public static void main(String[]args){
Scanner sc =  new Scanner(System.in);
System.out.println("enter any character");
char a = sc.nextLine().charAt(0);
char b = a.toUpperCase();
```

```
if(a.equals(b)){
System.out.println("UpperCase");
}
else
System.out.println("LowerCase");

}}
```

ans 6:

```
import java.util.Scanner;
public class CaseChecker{
public static void main(String[]args){
Scanner sc =  new Scanner(System.in);
System.out.println("enter any character");
char a = sc.nextLine().charAt(0);
char b = a.toUpperCase();

System.out.println(b);



}}
```

ans 7:

```
import java.util.Scanner;
        public class TaxCalculator{
public static void main(String[]args){
Scanner sc =  new Scanner(System.in);
System.out.println("enter your income amount");
int  price = sc.nextInt();
int tax;
int taxableAmount;

if(price<=100000){
 taxableAmount =  + 0;

System.out.println("your taxableAmount is" + taxableAmount);
}
elseif(price>100000 && price< 150000){
taxableAmount = (10/100*price)+ 5000;
System.out.println("your taxableAmount is"+ taxableAmount);
}
else{
taxableAmount =          (30/100*price)+ 25,000;
ystem.out.println("your taxableAmount is "+ taxableAmount);}


}}
```

ans 8:

```
import java.util.Scanner;


public class LeapYearfinder{
public static void main(String[]args){
Scanner sc =  new Scanner(System.in);
System.out.println("enter year");
int  a = sc.nextInt();
if(a % 4== 0){
  if(a!%100==0){
  System.out.println("leap year");
  }
  elseif(a % 400 == 0){
  System.out.println("leap year");


  }
  }
  else{
  System.out.println("not a leap year");}
  }}
```

ans 9:

```
  import java.util.Scanner;


        public class NetAmountCalculator{
public static void main(String[]args){
Scanner sc =  new Scanner(System.in);
System.out.println("what do you want to buy");
String cat = sc.nextLine();
System.out.println("enter the price amount range");
int  price = sc.nextInt();
int price;
int discount;
int netAmount;
 if(cat == "laptop"){



if(price<=25000){
 discount = 0;
 netAmount = price - discount;


System.out.println("your netAmount is  + netAmount);
}
elseif(price>25000 && price<=57000){
discount = 5/100*price;
netAmount = price - discount;
```

```
System.out.println("your netAmount is"+ netAmount);
}
elseif(price >57000 && price <= 100000){
discount = 7.5/100*price;
netAmount = price - discount;
System.out.println("your netAmount is"+ netAmount);
}
else{
discount = 10/100*price;
netAmount = price - discount;
System.out.println("your taxableAmount is"+ taxableAmount);}
}



else{
if(price<=25000){
 discount =  5/100*price;;
 netAmount = price - discount;

System.out.println("your netAmount is  + netAmount);
}
elseif(price>25000 && price<=57000){
discount = 7.5/100*price;
netAmount = price - discount;
System.out.println("your netAmount is"+ netAmount);
```

```
}
elseif(price >57000 && price <= 100000){
discount = 10/100*price;
netAmount = price - discount;
System.out.println("your netAmount is"+ netAmount);
}
else{
discount = 15/100*price;
netAmount = price - discount;
System.out.println("your taxableAmount is"+ taxableAmount);}
}
}
}
```

ans 10:

```
import java.util.Scanner;
        public class AreaCalculator{
public static void main(String[]args){
Scanner sc = new Scanner(System.in);

System.out.println("what do you want to find the area of betweeen 1. Rectangle 2. circle 3. square?");
```

```
String a = sc.nextLine();


switch(a){


case "rectangle":

System.out.println("length*breadth");

break;


case "square":

System.out.println("length*length");

break;


case "circle":

System.out.println("Math.pow(radius, 2)*Math.pi");

break;




}

}}
```

ans 11.

```
public class Ascending{

public static void main(String[]args){


int a = 15; b = 2 ; c = 8;

int d[] = new int(3);

d = {a,b,c};

for (int i = 0; i < n; i++)
      {
         for (int j = i + 1; j < n; j++)
         {
            if (d[i] > d[j])
            {
               temp = d[i];
               d[i] = d[j];
               d[j] = temp;
            }
         }
      }


                  for(int i = 0; int< 3; i++){
   System.out.print(d[i]+ ",")      ;
           }
```

```
}



}}
```

ans 12:

```
import java.util.Scanner;
public class WordChecker{
public static void main(String[]args){
Scanner sc =  new Scanner(System.in);
System.out.println("enter any character");
int  a = sc.nextLine().charAt(0);
if(a <=0 || a>0){
System.out.println("digit");}
else
System.out.println("letter");
}}
```

ans 13:

```
import java.util.Scanner;


public class Reverse{

public static void main(String[]args){


Scannner sc = new Scanner(System.in);

System.out.println("enter any integer");

int in = sc.nextInt();

int temp = in;

int n;

int sum;

int r;

int reverse;

while(temp!=0){

temp = temp/10;

r = temp%10;

reverse += reverse*10+r;

}

System.out.println("reverse of the given integer is"+reverse);}}
```

ans 14:

```
import java.util.Scanner;

public class SumCalculator{

public static void main(String[]args){


Scannner sc = new Scanner(System.in);

System.out.println("enter any integer");

int in = sc.nextInt();


int temp = in;

int sum;

int r;



while(temp!=0){

temp= temp/10;

r = temp%10;

sum = sum + r;

System.out.println("the sum is" + sum);

}

}}
```

ans 15:

```
import java.util.Scanner;

public class Palindrome{

public static void main(String[]args){


Scannner sc = new Scanner(System.in);

System.out.println("enter any integer");

int in = sc.nextInt();

Arraylist<int>ar = new Arraylist<int>();

int arr[] = new int(n);

int temp = in;

int n;

int sum;

int r;

int reverse;

while(temp!=0){

temp = temp/10;

r = temp%10;

reverse += reverse*10+r;

}
```

```
if(reverse == in )
{
System.out.println("number is palindrome");
}
}}
```

ans 16:

```
import java.util.Scanner;
public class Armstrong{
public static void main(String[]args){

Scannner sc = new Scanner(System.in);
System.out.println("enter any integer");
int in = sc.nextInt();
int temp = in;
int n;
int sum;
int r;

while(temp!=0){
temp = temp/10;
n++;}
```

```
while(temp!=0){
temp= temp/10;
r = temp%10;
sum = sum + Math.pow(r, n)
}
if(sum== in )
{
System.out.println("number is armstrong");
}

}}
```

ans 17:

```
import java.util.Scanner;
public class Absolute{
public static void main(String[]args){
Scanner sc = new Scanner(System.in);
System.out.println("enter any integer");
int in = sc.nextInt();
if(in<0){
in = -(in);
}

System.out.println(in);
}}
```

ans 18:

```
import java.util.Scanner;

public class Dayfinder{

public static void main9String[]args){

Scanner sc = new Scanner(System.in);

/System.out.println("enter any integer other than 0");/

int n = sc.nextInt();

if(n == 0 ){

System.out.println("enter any integer other than 0");}


n = n%7;


switch(n){


case 0:

System.out.println("saturday");

break;


case 1:

System.out.println("sunday");


case 2:

System.out.println("monday");
```

```
case 3:
System.out.println("tuesday");

case 4:
System.out.println("wednesday");

case 5:
System.out.println("thursday");

case 6:
System.out.println("friday");
}}}
```

ans 19:

```
import java.util.Scanner;
public class Attendance{
public static void main(String[]args){

Scannner sc = new Scanner(System.in);
System.out.println("enter total no of classes held");
int hd = sc.nextInt();
System.out.println("enter total no of classes attended");
int ad = sc.nextInt();
```

```
int hdper = (ad/hd)*100%;


if(hdper < 75%){
System.out.println("did you have a medical cause. Write T if yes and N if no");
String s = sc.nextLine();
if(s == "T"){
System.out.println("you are allowed in exam hall. Make sure to bring your medical report. ");
}
else{
System.out.println("you aren't allowed in exam hall");
}

else{
System.out.println("you are allowed in exam hall"
}

}}}



ans 20:
import java.util.Scanner;
public class NatureOfRoots{
public static void main(String[]args){

Scannner sc = new Scanner(System.in);
```

```
System.out.println("enter three coefficients for quadratic equations");

int a = sc.nextInt();

int b = sc.nextInt();

int c = sc.nextInt();


int nat = Math.pow(b,2) - 4*a*c;


if(nat < 0 ){

System.out.println("roots are unequal imaginary.");}

elseif(nat == 0){

System.out.println("roots are equal and real");}

else{

System.out.println("roots are unequal and real");}




}}
```

ans 21:

```
import java.util.Scanner;

public class EqualDecimalDigits{

public static void main(String[]args){


Scannner sc = new Scanner(System.in);
```

```
System.out.println("enter two floating numbers having more than 3 decimal digits");
float fn = sc.nextFloat();
float sn = sc.nextFloat();

fn = fn *1000;
sn = sn* 1000;

if(fn == sn){
System.out.println("numbers are equal");}




}}
```

ans 22:

```
import java.util.Scanner;
public class EqualDigits{
public static void main(String[]args){

Scannner sc = new Scanner(System.in);
System.out.println("enter two  numbers having more than 3 digits");
int fn = sc.nextint();
int sn = sc.nextint();
```

```
fn = fn%1000;

sn = sn%1000;


if(fn == sn){

System.out.println("numbers are equal");}









}}
```

ans 23:

```
import java.util.Scanner;

public class EqualDigits{

public static void main(String[]args){


Scannner sc = new Scanner(System.in);

System.out.println("enter two  numbers ");

int fn = sc.nextint();
```

```
int sn = sc.nextint();


if(fn >sn)? fn:sn;
}}
```

ans 24:

```
import java.util.Scanner;
public class EqualDigits{
public static void main(String[]args){

Scannner sc = new Scanner(System.in);
System.out.println("enter  number");

int sn = sc.nextint();


if(sn % 2 == 0)? "even":"odd";
}}
```

ans 25:

```
import java.util.Scanner;
public class EqualDigits{
public static void main(String[]args){
```

```
Scannner sc = new Scanner(System.in);

System.out.println("enter  number");


int sn = sc.nextint();


String s = (sn % 5 == 0)? "divisible by 5":"not divisible by 5";

System.out.println(s);


}}
```

ans 26:

```
import java.util.Scanner;

public class EqualDigits{

public static void main(String[]args){

Scannner sc = new Scanner(System.in);

System.out.println("enter  number");


int sn = sc.nextint();


String s = (sn % 5 == 0 && sn%2 == 0)? "even divisible by 5":"not divisible by 5 or maynot be even";

System.out.println(s);
```

}}

ans 27:

```
import java.util.Scanner;

public class EqualDigits{

public static void main(String[]args){


Scannner sc = new Scanner(System.in);

System.out.println("enter  year");


int yr = sc.nextint();


String s =(yr%4==0 )? (yr%100!=0)?"leap year":(yr % 400 == 0)("this is leap year"): "not a leap yaer"



}}
```

ans 28:

```
import java.util.Scanner;

public class LargeDigits{

public static void main(String[]args){


Scannner sc = new Scanner(System.in);

System.out.println("enter  three numbers");


int f = sc.nextint();

int s = sc.nextint();

int t = sc.nextint();


int r = (f>s)? if(f>t)? f: t: if(s>t)? s : t ;

 System.out.println(r);


}}
```

ans 29:

```
import java.util.Scanner;

public class MonthDays{

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

```
Scannner sc = new Scanner(System.in);

System.out.println("enter  any month number");


int m = sc.nextint();


System.out.println("enter  any year number");


int y = sc.nextint();

int lpy = 0;

if(y%4==0){

 if(y%100!=0){

lpy = 1;}

else(y%400==0){

lpy = 1;}

else{

lpy =0;}


if(lpy= 1){



switch(m){


case 1:

System.out.println(y +"has" + 31+ "days");}
```

```
break;
case 2:
System.out.println(y +"has" + 28+ "days");
break;
case 3:
System.out.println(y +"has" + 31+ "days");
break;
case 4:
System.o8t.println(y +"has" + 30+ "days");
break;
case 5:
System.out.println(y +"has" + 31+ "days");
break;
case 6:
System.out.println(y +"has" + 30+ "days");
break;
case 7:
System.out.println(y +"has" + 31+ "days");
break;
case 8:
System.out.println(y +"has" + 31+ "days");
break;
case 9:
System.out.println(y +"has" + 30+ "days");
break
```

```
case 10:
System.out.println(y +"has" + 31+ "days");
break;
case 11:
System.out.println(y +"has" + 30+ "days");
break;
case 12:
System.out.println(y +"has" + 31+ "days");
break;
}

else{
case 1:
System.out.println(y +"has" + 31+ "days");}
break;
case 2:
System.out.println(y +"has" + 29+ "days");
break;
case 3:
System.out.println(y +"has" + 31+ "days");
break;
case 4:
System.out.println(y +"has" + 30+ "days");
break;
case 5:
```

```
System.out.println(y +"has" + 31+ "days");
break;
case 6:
System.out.println(y +"has" + 30+ "days");
break;
case 7:
System.out.println(y +"has" + 31+ "days");
break;
case 8:
System.out.println(y +"has" + 31+ "days");
break;
case 9:
System.out.println(y +"has" + 30+ "days");
break
case 10:
System.out.println(y +"has" + 31+ "days");
break;
case 11:
System.out.println(y +"has" + 30+ "days");
break;
case 12:
System.out.println(y +"has" + 31+ "days");
break;
}
```

ans 30:

```
import java.util.Scanner;
public class EqualDigits{

public static void main(String[]args){

Scannner sc = new Scanner(System.in);
System.out.println("enter  three sides of a triangle");

int a = sc.nextint();
int b = sc.nextint();
int c= sc.nextint();

if(c+a > b && a+b > c && b+c > a ){

System.out.println("triangle is valid");}
```

```
if(a==b && b==c){
System.out.println("triangle is eqilateral");}
}

if (a==b || b==c || c==a){
System.out.println("triangle is isoceles");}

if(a!=b && b!=c && c!=a ){
System.out.println("triangle is scalene");}
```