**ASSIGNMENT # 02**

**Q.1: Create two integer variables length and breadth and assign values then check if they are square values or rectangle values.  
ie: if both values are equal then it's square otherwise rectangle.**

void main() {

int length = 5;

int breadth = 7;

if (length == breadth)

{

print("Square");

}

else

{

print("Rectangle");

} }

**OUTPUT**

Rectangle

**Q.2: Take two of age of 3 people by user and determine oldest and youngest among them.**

void main () {

int ali = 31;

int ahmed = 33;

int bilal = 40;

**// to find youngest age**

if(ali < ahmed && ali < bilal)

{

print("Ali is youngest, $ali Years old.");

} else if (ahmed < ali && ahmed < bilal)

{

print("Ahmed is youngest, $ahmed Years old.");

} else if (bilal < ali && bilal < ahmed)

{

print("Bilal is youngest, $bilal Years old.");

}

**// to find oldest age**

if(ali > ahmed && ali > bilal)

{

print("Ali is oldest, $ali Years old.");

} else if (ahmed > ali && ahmed > bilal)

{

print("Ahmed is oldest, $ahmed Years old.");

} else if (bilal > ali && bilal > ahmed)

{

print("Bilal is oldest, $bilal Years old.");

} }

**OUTPUT**

Ali is youngest, 31 Years old.

Bilal is oldest, 40 Years old.

**Q.3: A student will not be allowed to sit in exam if his/her attendence is less than 75%. Create integer variables and assign value:  
Number of classes held = 16,  
Number of classes attended = 10,  
and print percentage of class attended.  
Is student is allowed to sit in exam or not?**

void main() {

int classes\_held = 16;

int attended\_classes = 10;

num percentage = (attended\_classes \* 100) ~/ classes\_held;

print ("Percentage of class attended : $percentage%");

if (percentage >=75)

{

Print ("Allowed to sit in exam.");

} else {

Print ("Not allowed to sit in exam.");

}}

**OUTPUT**

Percentage of class attended : 62%

Not allowed to sit in exam.

**Q.4: Create integer variable assign any year to it and check if a year is leap year or not.  
If a year is divisible by 4 then it is leap year but if the year is century year like 2000, 1900, 2100 then it must be divisible by 400.  
i.e: Use % ( modulus ) operator.**

void main() {

int year = 2002;{

print("Year $year");

if (year%400 == 0 && year%4 ==0)

{

print ("Is leap year");

}

else if (year%400 == 0 || year%4 == 0)

{

print ("Is leap year");

}

else {

print ("Is not leap year");

}}}

**OUTPUT**

Year 2002

Is not leap year

**Q.5  Write a program to read temperature in centigrade and display a suitable message according to temperature:  
You have num variable temperature = 42;  
Now print the message according to temperature:  
temp < 0 then Freezing weather  
temp 0-10 then Very Cold weather  
temp 10-20 then Cold weather  
temp 20-30 then Normal in Temp  
temp 30-40 then Its Hot  
temp >=40 then Its Very Hot**

void main() {

int temperature = 11;

print("Temperature ${temperature} Degree Centigrade");

if (temperature < 0){

print("Freezing Weather");

} else if (temperature < 11) {

print ("Very Cold Weather");

} else if (temperature < 21) {

print ("Cold Weather");

} else if (temperature < 31) {

print ("Normal Temperature");

} else if (temperature < 40) {

print ("Its Hot");

} else if (temperature >= 40) {

print ("Its very hot");

}

else {

print ("No Temperature recorded");

}}

**OUTPUT**

Temperature 11 Degree Centigrade

Cold Weather

**Q.6: Write a program to check whether an alphabet is a vowel or consonant.**

void main() {

var alphabet = "I";

var lower\_case = ("a,e,i,o,u");

var upper\_case = ("A,E,I,O,U");

if(alphabet=="a" || alphabet=="e" || alphabet=="i" || alphabet=="o" || alphabet=="u")

{

print("$alphabet ,is a vowel");

}

else if(alphabet=="A" || alphabet=="E" || alphabet=="I" || alphabet=="O" || alphabet=="U")

{

print("$alphabet ,is a vowel");

}

else

{

print("$alphabet ,is a consonant");

} }

**OUTPUT**

I ,is a consonant

**Q.7: Write a program to calculate and print the Electricity bill of a given customer. Create variable for customer id, name, unit consumed by the user, bill\_amount and print the total amount the customer needs to pay. The charge are as follow :  
  
Unit    Charge/unit  
upto 199    @1.20  
200 and above but less than 400    @1.50  
400 and above but less than 600    @1.80  
600 and above             @2.00;  
  
Test Data :  
id: 1001  
name: James  
units: 800  
Expected Output :  
Customer IDNO :1001  
Customer Name :James  
unit Consumed :800  
Amount Charges @Rs. 2.00 per unit : 1600.00  
Net Bill Amount : 1840.00**

void main () {

var id = 1001;

var name = "James";

int units = 800;

double amount = 0.0;

double ucharge = 0.0;

if (units < 200){

ucharge = 1.20;

} else if (units >= 200 && units < 400){

ucharge = 1.50;

} else if (units >= 400 && units < 600){

ucharge = 1.80;

} else {

ucharge = 2.00;

}

amount = ucharge \* units;

double tax = (amount \* 15)/100;

double net\_amount = amount + tax;

print ("Customer ID No. : $id");

print ("Customer Name : $name");

print ("Units Consumed : $units units");

print ("Amount charges @Rs. $ucharge per unit : $amount");

print ("Net Bill Amount = $net\_amount");

}

**OUTPUT**

Customer ID No. : 1001

Customer Name: James

Units Consumed : 800 units

Amount charges @Rs.2 per unit: 1600

Net Bill Amount= 1840