JAVA LANGUAGE

Java Variables------  
  
1) Local Variable  
==) A Variable declare inside the body of the method is called local variable.  
2)Instance Variable  
=) A Variable declared inside the class but outside the body of the method.  
3) Static Variable  
==)A varable that is declared as a static is called static variable.     
  
class Static {  
static int a;  
static float b;  
static char c;  
static boolean d;  
static String e;  
public static void main(String args[]){  
System.out.println("Static Interger default value ="+a);  
System.out.println("Static float default value ="+b);   
System.out.println("Static character default value ="+c);    
System.out.println("Static boolean Default value ="+d);   
System.out.println("Static String default value ="+e);    
}  
}  
  
  
Note:= LocaL Variable and Static variable can have the same.  
     > when be accessed a variable inside the function directly, its give first  
      priority for local variable. if Local variable is not present it's looking for  
      Static variable.     
  
  
  
 class Static{  
 static int a=10;  
 public static void main(String args[]){  
 int a=20; //local variable  
System.out.println(a);  
System.out.println(Static.a);  
}  
}   
  
  
Constructor:== Special java method having the same name of class.  
         > Constructor Doesn't allow retun type.   
         > In the process of object creation we must call the constructor.  
         > we can set values to non-static variable through constructor only.  
  
   
 class Static {  
{  
 System.out.println("Inside Instance block");//Non-static block  
 }  
 Static(){  //constructor  
 System.out.println("Inside Constructor");  
 }  
public static void main(String args[]){  
System.out.println("Inside Main");  
 new Static(); //new used for creating a object  
}  
}   
  
  
  
note:- Static block execute only once in the application.  
    > non-Static blocks and constructor executes every time when object is create.  
\*/  
  
  
class Test{  
 static{  
 System.out.println("Static Block::");//static block //fisrt  
 }  
 Test(){  
 System.out.println("Constructor call");//constructor //fourth  
 }  
  
{  
 System.out.println("Inside non-static block"); //non-static block //third  
}  
  
public static void main(String args[]){  
System.out.println("inside main");  //main //secod  
new Test();  
new Test();  
new Test();  
new Test();  
}  
}  
  
  
Char()            and        Varchar()  
  
create table Student (  
 StuId Integer,  
 StuName Char(30)/Varchar(30),  
 Marks integer  
);  
  
Inseert into Student Values(1,"chandan",88);  
   
char(30)  
| c| h|a | n|d | n| | | | | | | | | | |  | | |//waste  
  
varchar(30)  
  
|c | h|a |n |d  |n | | | | | | | | | | | | | | |//release  
  
where we can used?  
 char()- limited lenghth of the string  state br, tn, ud,, country ind, usa  
 varchar()- doesn't matter the string length  
  
  
  
  
  
   
  
  
/\*  
import java.util.\*;  
class Arithmatic   
{  
public static void main(String args[])  
{  
int num1, num2, sum, sub, mul, div, mod;  
System.out.println("Enter the two numbers");  
Scanner in =new Scanner(System.in);  
num1=in.nextInt();  
num2=in.nextInt();  
sum=num1+num2;  
System.out.println("The sum of two number is =" +sum);  
sub=num1-num2;  
System.out.println("The substraction of two the number is =" +sub);  
mul=num1\*num2;  
System.out.println("The Multiplication of two number is =" +mul);  
div=num1/num2;  
System.out.println("The Division of two number is =" +div);  
mod=num1%num2;  
System.out.println("The Modulos of two number is =" +mod);  
}  
}  
  
  
    
  
import java.util.\*;  
class Rectangle   
{  
public static void main(String args[]){  
float Length,Breadth;  
float Area, Perimeter;  
System.out.println("Enter the values of Length and breadth");  
Scanner s =new Scanner(System.in);  
Length=s.nextFloat();  
Breadth=s.nextFloat();  
Area=Length\*Breadth;  
System.out.println("The Area of Reactangle is ="+Area);  
Perimeter=2\*(Length+Breadth);  
System.out.println("The Perimeter of Reactangle is ="+Perimeter);  
}  
}  
  
  
Java Control Statements--  
  
java Provides three types of Control Statements.  
  
1. Decision Making Statements  
 > if Statement  
 > switch statement  
  
2. Loop Statements  
 > for Loop  
 > while loop  
 > do while loop  
 > for-each loop  
  
3. Jump statement  
 > break Ststement  
 > Continue statement  
  
  
 ## If ststements  
   >Simple if statement  
   >if-else statement  
   >if-else-if-ladder  
   >Nested if-ststement  
    
  
 \* Simple if ststement  
  
   Syntax:-   
     if(codition){  
     statement1:  
     ========//executes when condition is true  
   ==========  
    }  
   Ex:-     
  
  class If{  
  public static void main(String args[]){  
   int a=10, b=10;  
  if(a==b){  
   System.out.println("Both A and B values are Equal");  
  }  
  }  
  }  
  
  
  \* if-else ststement  
  
   Syntax:-   
     if(codition){  
     statement1:  
     ========//executes when condition is true  
     ========  
    }  
      else{  
      statement2:  
    }  
  
   Ex:-     
  
  class IfElse{  
  public static void main(String args[]){  
   int a=10, b=12;  
  if(a==b){  
   System.out.println("Both A and B values are Equal");  
  }  
    else{  
   System.out.println("Both A and B values are Not Equal");  
  }  
  }  
  }  
  
  \*\*if-else-if-ladder  
    
 Syntax:-  
  
  if(condition1){  
 statement1;//execute when the condition1 is true  
  }  
  else if(condition2){  
  statement2;//execute when condition2 is true  
  }  
 else {  
 statement3;//execute when both the condition are false  
 }  
  
  Example:-  
  
  
import java.util.\*;   
class IfElseIf {  
public static void main(String args[]){  
int a,b,c,d;  
System.out.println("Enter the four Numbers");  
Scanner in=new Scanner(System.in);  
a=in.nextInt();  
b=in.nextInt();  
c=in.nextInt();  
d=in.nextInt();  
if(a>=b && a>=c && a>=d){  
 System.out.println("A is the greater Number ="+a);  
}  
else if(b>=a && b>=c && b>=d){  
System.out.println("B is the greater Number ="+b);  
}  
else if(c>=a && c>=b && c>=d){  
System.out.println("C is the greater Number ="+c);  
}  
else{  
System.out.println("D is the greater Number ="+d);  
}  
}  
}  
  
  
 \* Switch Statement;  
  
   > Switch Statement are similar to if-else-if statements.  
  
   Systax:-  
   
     switch(expression){  
      case value1:  
       statement1;  
       break;  
       case value2:  
       statement2;  
       break;  
        ...  
        .  
        .  
        .  
        case valueN:  
        StatmentN;  
        break;  
          
       default:  
       default statement;  
    }   
  
  
    Example:-  
\*/  
  
     import java.util.\*;  
     class SwitchExample {  
     public static void main(String args[]){  
     int num,a,b;  
     float sum,sub,mul,div,mod;  
     System.out.println("Enter the two numbers");  
     Scanner in=new Scanner(System.in);  
     a=in.nextInt();  
     b=in.nextInt();  
     System.out.println("Enter the number as we want to proceed");  
     num=in.nextInt();  
     switch(num){  
  
     case 0:  
     sum=a+b;  
     System.out.println("Addition of two numbers are="+sum);  
     break;  
       
     case 1:  
     sub=a-b;  
     System.out.println("Substraction of two numbers are="+sub);  
     break;  
  
     case 2:  
     mul=a\*b;  
     System.out.println("Multiplication of two numbers are="+mul);  
     break;  
  
     case 3:  
     div=a/b;  
     System.out.println("division of two numbers are="+div);  
     break;  
  
     case 4:  
     mod=a%b;  
     System.out.println("Modulos of two numbers are="+mod);  
     break;  
  
     default:  
     System.out.println("Thanks Try Again");  
     }  
  }  
 }  
     

  Exercice:-   
  Q1. write a Java Program to find the avarge of Five Subjects Marks  
   and calculate the Score according to marks.  
  Condition:- if marks is more than 80 and less than 100 than print Distinction.  
             > if marks is more than 70 and less than 80 than print first division.  
             > if maeks is more than 60 and less than 70 than print second division  
             > if marks is more than 50 and less than 60 than print third division.  
             > if marks is below 50 then print the result is fail.  
         
  
  /\* i take 5 subjects...   
   then find the average of all five subjects.  
   then calculate grade and then after print grade with valuable comments. \*/  
/\*  
import java.util.\*;  
class GradeCalculate{  
public static void main(String args[]){  
int S1,S2,S3,S4,S5;  
float Result;  
Scanner in=new Scanner(System.in);  
System.out.println("Enter the Five Subject Marks");  
S1=in.nextInt();  
S2=in.nextInt();  
S3=in.nextInt();  
S4=in.nextInt();  
S5=in.nextInt();  
Result=(S1+S2+S3+S4+S5)/5;  
System.out.println("Results of All Five Subjects Marks ="+Result);  
String grade;  
  
if(Result>=80){  
grade="A+";  
}  
else if(Result>=60 && Result<80)  
{  
grade="A";  
}  
else if(Result>=40 && Result<60)  
{  
grade="B";  
}  
else if(Result>=30 && Result<40)  
{  
grade="C";  
}  
else{  
grade="Fail";  
}  
switch(grade)  
{  
 case "A+" :  
 System.out.println("Excellent");  
 break;  
  
 case "A" :  
 System.out.println("Well Done");  
 break;  
  
 case "B" :  
 System.out.println("Good");  
 break;  
  
 case "C" :  
 System.out.println("You Passed");  
 break;  
  
 case "Fail" :  
 System.out.println("Better Luck Try Again");  
 break;  
  
 default :  
 System.out.println("Invalid Grade");  
}  
System.out.println("Your Grade is =" +grade);  
}  
}  
\*/  
/\*  Loop Statements  
              >  loop statements are used to execute the set of instructions in a  
                 repeated order. The execution of the set of instructions depends   
                 upon a particular condition.  
  
  1. for loop  
            > It enables us to initialize the loop variable, check the condition,  
              and Increament/decreamnet in a single line of code.   
             
   Syntax:-  
    
   for(initialization, condition, increament/decreamnet){  
    //block of statements  
    }  
     
  Example:-  
\*/       
     import java.util.\*;  
     class Calculate{  
     public static void main(String args[])  
     {  
     int i,num, sum=0;  
     Scanner in=new Scanner(System.in);  
     System.out.println("Enter the value of Number");  
     num=in.nextInt();  
     for(i=1;i<=num;i++){  
     System.out.println("The series are ="+i);  
     sum=sum+i;  
      }  
      System.out.println("The sum of total first 10 Number is ="+sum);  
     }  
    }     
  
  
//  2. while loop  
// 3. do-while loop  
  
/\* 1 2 3 4 5 6 7 8 9 10 =55  
   
 11 12 13 14 15 16 17 18 19 20=155  
  
 21 22 23 24 25 26 27 28 29 30=255  
   
 61 62 63 64 65 66 67 68 69 70=655  
   
    
  
55+155+255=465  
  
\*/  
  
  
//W A  J  P to check whether a number is a prime number or not.

 W A J P to print a fibonacci series. ...

 W a j P to print the factor of a number.

Ex:- 18-1,2,3,6,9,18

//Java Program to check if the number is a prime number or not.  
/\*  
  
import java.util.\*;  
class PrimeNumber  
{  
public static void main(String args[])  
{  
int i,n,flag=0;  
System.out.println("Enter the value of Number");  
Scanner in=new Scanner(System.in);  
n=in.nextInt();  
if(n==0 || n==1){  
System.out.println("Number is not prime");  
}  
else{  
for(i=2;i<=n/2;i++){     
if(n % i==0){  
System.out.println("Number is not prime number");  
 flag=1;  
 break;  
}  
}  
if(flag==0){  
System.out.println("Number is prime number");  
}  
}  
}  
}  
  
  
//Continue Statement  
  
 > Java continue statement is used to continue the loop. it continues the current  
   flow of the program.  
  
 Syntax:-  
  jump-statement;  
  continue;  
  
 Ex:-  
      
   class ContinueExample  
   {  
   public static void main(String args[])  
   {  
   for(int i=1;i<=10;i++)//Dynamic Initialization   
   {  
    if(i==5)  
     {  
      continue;    
    }  
   System.out.println(i);  
  }  
 }  
}    
  
    
 Break Statement:- Java Break Statement is used to break a loop. it breaks the current flow of the program at specified conditions.  
  
 Syntax:-  
     
    Jump-statement;  
    break;  
  
Example:-  
 \*/        
    
class BreakExample  
   {  
   public static void main(String args[])  
   {  
   for(int i=1;i<=10;i++)//Dynamic Initialization   
   {  
    if(i==5)  
     {  
      break;    
    }  
   System.out.println(i);  
  }  
 }  
}    
  
  
  
Q1. Write a java Program to check whether the number is Armostron number or not.

Q2. Write a Java Program to check whether the number is Palindrome number or not.