**import** java.lang.\*;

**public** **class** Myclass {

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

// **TODO** Auto-generated method stub

System.***out***.print("Hello world");

}

}

//Type pramotion

**import** java.lang.\*;

**public** **class** Myclass {

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

**float** x=5;

System.***out***.print(x);

}

}

O/p 5.0

//5.7 hard code data without handle is read as double

**import** java.lang.\*;

**public** **class** Myclass {

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

**float** x=5.7f; //observe f suffix represent float. otherwise it will be double

**if**(5.7==x) // 5.7 is read as double

System.***out***.print(x);

**else**

System.***out***.print("5.7 is read as double");

}

}

//int and int result is int

**import** java.lang.\*;

**public** **class** Myclass {

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

// **TODO** Auto-generated method stub

**int** a,b;

a=5;

b=2;

**int** c=a/b;

System.***out***.println(c);//2

}

}

//Now “c” Is float

**import** java.lang.\*;

**public** **class** Myclass {

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

**int** a,b;

a=5;

b=2;

**float** c=a/b;

System.***out***.println(c);//2.0

}

}

O/P=2.0

//finally correct answer int and float result is float

**import** java.lang.\*;

**public** **class** Myclass {

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

**int** a;

**float** b;

a=5;

b=2;

**float** c=a/b;

System.***out***.println(c);//2.5

}

}

//but I want to declare a and b as int only and still I should get correct out put

//type cast

**import** java.lang.\*;

**public** **class** Myclass {

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

**int** a,b;

a=5;

b=2;

**float** c=( **float**)a/b;

System.***out***.println(c);//2.5

}

}

//type cast to byte to get ascii value

**import** java.lang.\*;

**public** **class** Myclass {

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

**char** c='A';

System.***out***.println(c);

**byte** b=(**byte**)c;

System.***out***.println(b);//65

}

}

// char+char =int

Byte+byte=int

Short+short=int

//check following code you will get error why?

**import** java.lang.\*;

**public** **class** Myclass {

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

**short** s1,s2;

s1=3;

s2=9;

**short** a=s1+s2;

System.***out***.println(a);

}

}

//Yes either store in int or type cast to short

**import** java.lang.\*;

**public** **class** Myclass {

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

**short** s1,s2;

s1=3;s2=9;

**int** a=s1+s2;

System.***out***.println(a);

}

}

//Observe

//be careful

**import** java.lang.\*;

**public** **class** Myclass {

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

**byte** s1,s2;

s1=3;s2=9;

**byte** a=s1+s2;

System.***out***.println(a);

}

}

Type mismatch: cannot convert from int to byte

0

-32766

2

3

4

-32767

-32768

5

32767

1

-1

-2

-3

**import** java.lang.\*;

**public** **class** Myclass {

**public** **static** **void** main(String[] args)

{

**short** s1,s2;

s1=32767;s2=1;🡺3

**short** a=(**short**) (s1+s2);

System.***out***.println(a);

}

}

//-32768

**short** a=(**short**) (s1)+s2; 🡺Err

//Scope of variable is local to the block

|  |  |  |
| --- | --- | --- |
| static  0  no  +++++++++++ | No global variable in java | External Memory |
|  | | Heap |
| {  y+  +++++++++++  2  {  z+  +++++++++++  3    }  } | | Stack |

**import** java.lang.\*;

**public** **class** Myclass

{

**static** **int** *no*;

**public** **static** **void** main(String[] args)

{

**int** y=2;

{ **int** z=3;

System.***out***.println(z);

}

System.***out***.println(z); err

System.***out***.println(y);

System.***out***.println(*no*);

System.***out***.println(Myclass.*no*); //class name . variable

}

}

int a;

try{

a=5;

}

catch{

sopln(a);

}

//scope of n in in for loop only

**import** **static** java.lang.System.***out***;

**public** **class** Myclass {

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

**for**(**int** n=0;n<=2;n++)

{

***out***.print(n);//0 1 2

}

***out***.print(n); //error

}

}

//sum of two number

2

5

3

a

b

c

2000

2004

2008

**import** java.lang.\*;

**import** java.util.\*;

**public** **class** Myclass {

Object

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

**int** a,b,c;

Scanner sc= **new** Scanner(System.***in***); //System.in is a standard input stream.

Public class Scanner

{ //constructor

Public Scanner(a){

Myvar= a;

***}***

***Public int*** nextInt(){}

}

System.***out***.print("Enter 2 number ");

Reference

sc

a= sc.nextInt();

b= sc.nextInt();

STACK

// int r= **new** Scanner(System.***in***).nextInt()

c=a+b;

System.***out***.print(c);

2

5

3

a

b

2000

2004

2008

}

}

HEAP

**import** java.lang.\*;

No handle for

Value 5

**import** java.util.\*;

**public** **class** Myclass {

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

**int** a,b;

Scanner sc= **new** Scanner(System.***in***); //System.in is a standard input stream.

System.***out***.print("Enter 2 number ");

a= sc.nextInt();

b= sc.nextInt();

System.***out***.print(a+b);

7

}

}

2

5

3

a

b

2000

2004

**import** java.lang.\*;

**import** java.util.\*;

**public** **class** Myclass {

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

**int** a,b;

Scanner sc= **new** Scanner(System.***in***); //System.in is a standard input stream.

System.***out***.print("Enter 2 number ");

a= sc.nextInt();

b= sc.nextInt();

a=a+b;

System.***out***.print(a);//5

}

}