INTRODUCTION TO JAVA

LECTURE 3 : HOW IS DATA STORED?

(Short data type)

1. Short data type has a minimum value of -

a) -2,147,483,648 **b) -32,768**

c) -32,767 d) -127

SOLUTION DESCRIPTION:

Short is of 16 bits. Here, 1 bit is used to store the sign and the remaining 15 bits for the value. So the smallest value a short data type can store is : - 2^15., where 2^15 is -32,768.

(Byte)

2. Range of byte data type is ?

a) -128 to 255 b) -128 to 256

c) -128 to 127 d) -127 to 128

SOLUTION DESCRIPTION:

####Range of byte(8 bits) is : -2^7 to 2^7-1

(Check for Error)

3. Will following statement give an error ?

```
float f = 1.4;
```

a) Yes b) No

SOLUTION DESCRIPTION:

####System treats all decimal numbers as double by default. So 1.4 is stored as double(which is of 8 bytes). When we will try put a double into a float(which is of 4 bytes), it will give you error.

(Figure out the Output)

4. What will be the output of the following statement ?

```
System.out.println('a' + 1);
```

ANSWER: 98

SOLUTION DESCRIPTION:

####When you add a character and an int, it will add the ASCII value of char ‘a’ i.e 97 and int 1. So ans will be 98.

(Figure out the Output)

5. What will be the output ?

```
int i = 'c';
System.out.println(i);
```

ANSWER: 99

SOLUTION DESCRIPTION:

When we put char ‘c’ into an int, its ASCII value will be put in the int i.e. 99.

(Automatic type conversion)

6. Automatic type conversion in Java takes place when :

a) Two type are compatible and size of destination type is shorter than source type.

b) Two type are compatible and size of destination type is larger than source type.

c) Both 1 and 2

d) None of the above

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