Core Java Worksheet

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Day 1

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1. See video 1 and also learn
   1. <https://en.wikipedia.org/wiki/Java_(programming_language)>
   2. Also see version history from <https://dzone.com/articles/a-short-history-of-java>
2. See video 2 and install java 1.8 now . Current version of java is 10.
   1. <https://en.wikipedia.org/wiki/Java_bytecode>
   2. See also <https://www.youtube.com/watch?v=aLIIDPU9KX4>
3. See Video 3
   1. Try setting path and classpath
   2. Write helloworld code and compile and execute in command line
4. See video 4
   1. Follow the coding conventions for all the code which you are going to write
5. See video 5
   1. Remember the range of all primitive types.
   2. Write a class to define all the primitive types (8 types) .Following coding conventions when defining variables .. do not declare variables like i,j always give meaningful names and pronounceable names for class,method and variables.
   3. The ppt which i used in this video is also shared in the same google drive .. please get that ppt as well.
6. See video 6
   1. Write code for all the examples shown in the video
   2. Primitive type conversion concept is very important
7. See video 7
   1. If you have not seen eclipse video tutorial see it from <http://eclipsetutorial.sourceforge.net/>
   2. Operator precedence is very important .. the table which is shown in the ppt is very important
   3. Write code for all the operators discussed in the video
   4. Understand Operator Overloading we will see overloading in oops as well
8. See video 8
   1. Shift operators write code and see how it works
   2. <https://www.geeksforgeeks.org/bitwise-shift-operators-in-java/>
   3. <https://www.youtube.com/watch?v=fDKUq38H2jk>
9. See video 9
   1. Write code for Bitwise and logical operators
   2. Understand | and || , & and &&
   3. See the last example discussed and write that code and see
   4. https://www.youtube.com/watch?v=F8RI8DjeJwA
   5. <https://www.youtube.com/watch?v=iOi7Z6g1SjY>

Day 2

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1. See Video 10
   1. Write code for if and else
   2. ?: operator to replace if else
   3. Switch case example
   4. While loop
   5. Identify and correct the errors in each of the following pieces of code. [Note: There may be more than one error in each piece of code.]

1) if ( age >= 65 );

System.out.println( "Age is greater than or equal to 65" );

Else

System.out.println( "Age is less than 65 )";

*Answer:*

*1)if (age>=65)*

*System.out.println("Age is greater than or equal to 65");*

*else*

*System.out.println( "Age is less than 65");*

2) int x = 1, total;

while ( x <= 10 )

{

total += x;

++x;

}

*Answer:*

*Initialization for total is not done  
2) int x = 1, total;*

*while ( x <= 10 )*

*{*

*total += x;*

*++x;*

*}*

3) while ( x <= 100 )

total += x;

++x;

*Answer:*

*3) while ( x <= 100 )*

*{*

*total += x;*

*++x;*

*}*

4) while (y> 0 )

{

System.out.println( y );

++y

*Answer:*

*4) while (y> 0 ) //y is not initialized*

*{*

*System.out.println( y );*

*++y;*

*}*

f) What does the following program print?

public class Mystery

{

public static void main( String[] args )

{

int y;

int x = 1;

int total = 0;

while ( x <= 10 )

{

y = x \* x;

System.out.println( y );

total += y;

++x;

} // end while

System.out.printf( "Total is %d\n", total );

} // end main

} /

*Answer:*

*f) System.out.println( "Total is %d\n", total );*

*if corrected it will display*

*1*

*4*

*9*

*16*

*25*

*36*

*49*

*64*

*82*

*100*

*sum of the above*

g) What does the following program print ?

public class Mystery2  
{  
public static void main( String[] args )  
{  
int count = 1;  
  
while ( count <= 10 )  
{  
 System.out.println( count % 2 == 1 ? "\*\*\*\*" : "++++++++" );  
 ++count;  
 } // end while  
 } // end main  
 } /

*Answer:*

*g)*

*\*\*\*\**

*++++++++*

*\*\*\*\**

*++++++++*

*\*\*\*\**

*++++++++*

*\*\*\*\**

*++++++++*

*\*\*\*\**

*++++++++*

h) what does the following program do ?

public class Mystery3

{

public static void main( String[] args )

{

int row = 10;

int column;

while ( row >= 1 )

{

column = 1;

while ( column <= 10 )

{

System.out.print( row % 2 == 1 ? "<" : ">" );

++column;

} // end while

--row;

System.out.println();

} // end while

} // end main

}

*Answer:*

*>>>>>>>>>>*

*<<<<<<<<<<*

*>>>>>>>>>>*

*<<<<<<<<<<*

*>>>>>>>>>>*

*<<<<<<<<<<*

*>>>>>>>>>>*

*<<<<<<<<<<*

*>>>>>>>>>>*

*<<<<<<<<<<*

11) See video 11

1. Understand Do while loop . Do all the programs which are there in the video.
2. Understand break and continue
   1. Find the error in each of the following code segments, and explain how to

correct it:

i = 1;

while ( i <= 10 );

++i;

}

*Answer:*

*int i=1;*

*while(i<=10){*

*==i;*

*}*

for (k= 0.1; k != 1.0; k += 0.1 )

System.out.println( k );

*Answer:*

*for(float k=0.1;k<=10;k+=0.1)*

*System.out.println(k);*

int n = 2;

switch (n)

{

case 1:

System.out.println( "The number is 1" );

case 2:

System.out.println( "The number is 2" );

break;

default:

System.out.println( "The number is not 1 or 2" );

break;

}

*Answer:*

*int n = 2;*

*switch (n)*

*{*

*case 1:*

*System.out.println( "The number is 1" );*

*break;*

*case 2:*

*System.out.println( "The number is 2" );*

*break;*

*default:*

*System.out.println( "The number is not 1 or 2" );*

*break;*

*}*

The following code should print the values 1 to 10:

n = 1;

while (n< 10 )

System.out.println( n++ );

*Answer:*

*Int n = 1;*

*while (n<= 10 )*

*System.out.println( n );*

c) what does the followin program will do ?

public class Printing

{

public static void main( String[] args )

{

for ( int i = 1; i <= 10; i++ )

{

for ( int j = 1; j <= 5; j++ )

System.out.print( '@' );

System.out.println();

} // end outer for

} // end main

} // end class Printing

*Answer:*

*@ @ @ @ @*

*@ @ @ @ @*

*@ @ @ @ @*

*@ @ @ @ @*

*@ @ @ @ @*

*@ @ @ @ @*

*@ @ @ @ @*

@ @ @ @ @

@ @ @ @ @

@ @ @ @ @

d) what does the following program do ?

for (i= 1; i <= 5; i++ )  
{  
for (j= 1; j <= 3; j++ )  
{  
for (k= 1; k <= 4; k++ )  
System.out.print( '\*' );  
System.out.println();  
} // end inner for  
System.out.println();  
} // end outer for

*Answer:*

*I,j,k are not initialized.*