Tuesday, 8 March 16

Crux
Lecture -1

Programming Fundamentals -1

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CODING BLOCKS

Logistics

- Facebook Group
  - https://www.facebook.com/groups/cruxbvpmar16/
- Assignments
- Evaluation

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Eclipse?

Time to write Hello World!

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Print table of Fahrenheit to Celsius

Print the following table for Fahrenheit to Celsius using Formula C = (5/9)(F – 32)

```
  0      − 17
 20      −6
 40      4
 60       15
 80      26
 100    37
 120    48
 140    60
 160    71
 180    82
 200    93
 220     104
 240     115
 260     126
 280     137
 300     148
```

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Operators & Variables

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Change Code to take User Input

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Lets do these problems

- Max of three numbers
- Check if a number is prime
- Write code to print the following pattern

1
2 3
4 5 6
7 8 9 10

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Time to Try?

- Find all prime numbers between 2 to N
- Write code to print the following pattern

```
      1
     232
    34543
   4567654
  567898765
```

Java Virtual Machine

Functions

- Modifiers
- Return Type
- Name
- Arguments
- How to call Functions

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Variables and their Scope

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Arrays

- How to declare arrays?
- How are arrays stored in memory?
- How to access, update etc?

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Lets write some code

- Take an integer array input from the user
- Print out sum of an array
- Print out the largest element in the array

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Primitives & Non Primitives

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Your Turn

- Linear Search
- Reverse an Array

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Bubble Sort

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Selection Sort

String Class in Java

1. charAt
2. Substring
3. Concat
4. indexOf
5. startsWith
6. Immutable

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Lets write some code

- Print out all the characters of a String in different lines

- Write code to count number of characters, lines and words from the input. Input terminates by a '$'.

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Your turn

- Binary search in sorted array
- Print all the substrings of a string
- Check if a given String is Palindrome

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Thank You!

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