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EECS 10 DISCUSSION

7/3/12 Week2 Session1 Weiwei Chen

Discussion Outline

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- Administrations
- Quick Concepts Review
 - ▣ Comparison of values
 - ▣ Something about the Operators
 - ▣ Control flows in C
 - conditional statement
 - repetition statement
- Assignment Discussion
 - ▣ Calculate the approximate value of e^x

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Administrations

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- Good discussions on the course Messageboard
- Please post any homework or lecture related questions on the course Messageboard.
 - Questions via emails will be directed to the Messageboard
- Please read the posts on the Messageboard
 - Read the assignment!!
 - Read the lecture slides!!
- Please visit the discussion / lab sessions as well as the office hours for confusing questions
 - Face to face communicate if more efficient
- First mid-term on Thursday!!

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Comparison of Values

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- Relational Operators
- Logical Operators
- Conditional Operators
- Please write down your understanding about relational operators, logical operators and conditional operators (2min)

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Comparison of Values

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- Relational Operators
 - Direct comparison of two values
 - Boolean result: true or false
- Logical Operators
 - Operations on Boolean values
- Conditional Operators
 - Conditional evaluation of expressions

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Interactive Review: evaluate the following expressions

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- $5 < 6$ □ **1**
- `float f1 = 6.0, f2=6e1;`
 - $f1 > f2$ □ **0**
 - $f1 > -f2$ □ **1**
- `int i = 10;`
 - $(i < 20) \ \&\& \ (i > 5)$ □ **1**
 - $(i < 5) \ || \ (i > 10)$ □ **0**
 - $!((i < 1) \ || \ (i > 9))$ □ **0**
- `int d = -3; evaluate d`
 - $d = (4 < 5) ? (43) : (4+8)$ □ **d = 43**
 - $d = (d == -1-2) ? (-d) : (d)$ □ **d = 3**
 - $d = (d < 0) ? (-d) : d$ □ **d = 3**

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Operator Evaluation Order

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- Associativity
- Precedence
- Please refer to slide #17 of Lecture 3.

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Advanced Operators

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- Augmented Assignment Operators
 - +=, -=, *=, /=, %=, <<=, >>=, ||=, &&=
- Increment and Decrement Operators
 - Post-increment `count ++;`
 - Pre-increment `++ count;`
 - Post-decrement `count --;`
 - Pre-decrement `-- count;`

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Control Flows in C

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- C program lines are executed in a sequential way
- Conditional Statement
 - ▣ *if* statement
- Repetition Statement
 - ▣ *while* statement
- Minute Paper:
 - ▣ Write down the syntax of the *if* and *while* statement
 - ▣ Draw the control flow chart for the *if* and *while* statement.

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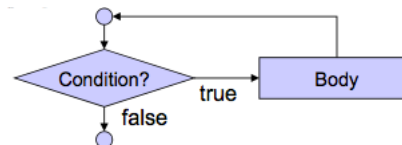
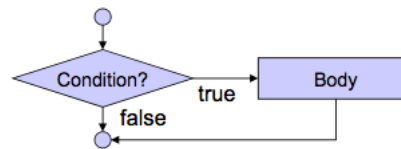
Control Flows in C

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- *if* Statement
 - ▣ *if*(/*condition*/)


```
{
            /*body;*/
          }
          /*after if statements;*/
```
- *while* Statement
 - ▣ *while*(/*condition*/)


```
{
            /*body;*/
          }
          /*after if statements;*/
```
 - Condition: expression evaluated to 1 (true) or 0 (false)



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Think-Pair-Share

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- Write the C program lines that will get the absolute value of an integer variable x (initial value is -42 , and store this value in an integer variable y).
 - Use the if-statement
- Write the C program lines to get the sum of the first 10 positive natural numbers.
 - Use the while statement

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Assignment Discussion

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- Assignment 2, Part 1
- Think-Pair-Share Activity
- Please refer to the sample program on Slides #30~#32 for Lecture 2.

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EECS10 LABORATORY

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Some good practices for writing the C program code

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- Always type parenthesis, brackets, quotes in pairs
- Indentation

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It is time to program!

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- Raise your hand if you need help