Mini Quiz 9 Topic List

Mini Quiz 9 covers material from **Labs 1-12**, with emphasis on newer material. The following is a summary of what you should know.

New topics:
- Strings
  - o Getting input from user (`cin >>` versus `getline`)
  - o Important functions to use with strings:
    - size - # of total characters
    - find (including first_of and last_of) - finds the position of a char (or string)
    - substr - creates a new string by "grabbing" multiple characters
      - 2 parameters - starting position and # of characters to "grab"
      - Example: `string name = "Ms. LeBlanc";`
                 `string title = name.substr(0, 3);`
                      `//now title holds "Ms."`

Topics from previous quizzes:
- One dimensional arrays
  - o How to declare arrays
  - o How to refer to elements of arrays (indexing starts at 0!) and use loops to work with them
  - o Example:
    ```
    int nums[8];
    cout << "Enter 8 numbers: ";
    for (int i=0; i<8; i++)
    cin >> nums[i];
    ```
- Parameters passed by reference (&)
  - o Passes the actual location in memory (not just a copy of its value)
  - o If the variable is changed in the function, it is changed outside the function also
- Functions
  - o Return types (output)
    - When we say a function <u>returns</u> a value, we mean that the return keyword is used
  - o Parameters (inputs)
    - When we say a function <u>accepts</u> a parameter, the parameter is passed into the function in the parameter list in the parentheses
    - Passed by value
  - o Variables only exist in the function they are declared in
  - o Variable types in prototype (declaration) and definition (code) must match
  - o Example:
    ```
    // Function prototype
    int addFunc (int a, int b);

    //main program
    int main()
    {
    int i, j, k;
    ```

```
          i = 12;
          j = 8;
          k = addFunc(i, j);
          cout << k;
          return 0;
       }
        //Function
       int addFunc (int a, int b)
       {
          int c;
          c = a + b;
          return c;
       }
```

- `switch` cases
- `while` loops
- `do-while` loops
- `for` loops
- Totaler variables
- If-else structures
- Notation for conditional testing
- Variables Types and Operations
- How to use `cin` and `cout` for input and output.
- How to format your output (e.g. putting some information on different lines)

You will complete the quiz **on paper** during class. You will not be allowed to use the computer or any other reference material.