C++ cin, endl, 
 & Comments

Instructor: Chi Tse (Ricky)
• cin is used to store the data obtained from the user in a variable
• cin works in conjunction with cout
• Examples:
  
  ```
  string name;
  cout << “Enter your first name: “;
  cin >> name;
  ```

  ```
  int num;
  cout << “Please enter a number: “;
  cin >> num;
  ```
Comments

• Comments in C++ source code usually serve the following purposes:

  1. Explain to a reader (another programmer) the purpose of the program.
  2. Note to other developers about what the particular block of code is doing.
  3. A to do list on tasks you need to complete.
1. An in line comment marks the rest of the text on the line as a comment
   // This is an inline comment.
   // Name: Chi Tse
   // Goal: Create a program to use variables
   // Created on Feb 7, 2016

2. Multi-line comment, marks a block of text as comment
   /*
   This is a block comment. All lines in between are comments.
   Name: Chi Tse
   Goal: Create a program to use variables
   Created on Feb 7, 2016
   */
In C++, they both mean new line.
endl --- it is used outside of ""
\n --- it is used inside of ""
\ --- it has special meaning

If you want to print \, you cannot use cout << "\\";
Instead, you will use cout << "\\";
Q1: What is the output?

```cpp
int main() {
    cout << "hi" << endl << endl << "hello" << endl;
    return 0;
}
```

A. hi
   hello

B. hi
   hello
Q2: Are the outputs the same?

```cpp
int main() {
    cout << "hi" << endl;
    return 0;
}

int main() {
    cout << "hi\n";
    return 0;
}
```

A. Yes  B. No
Q3: What is the output?

```cpp
int main() {
    cout << "today\ntomorrow" << endl;
    return 0;
}

A. today\ntomorrow  B. today tomorrow
```
Q4: What is the output?

```cpp
int main() {
    cout << "\\" << endl;
    return 0;
}
```

A. \ B. \\
int main() {
    cout << "\n" << endl;
    return 0;
}

A. \n
B. \n
(Choice A means zero or more new lines)
Q6: What is the output?

```cpp
int main() {
    cout << "endl" << endl;
    return 0;
}
```

A.       B. endl
Q7: What is the output?

```cpp
int main() {
    cout << "\n" << endl;
    return 0;
}
```

A. \n \n B. \n
Q8: What is the output?

```cpp
int main() {
    cout << "\\\\" << endl;
    return 0;
}
```

A. `\\`  B. `\\\\`
Q9: What is the output?

```cpp
int main() {
    cout << \n << endl;
    return 0;
}
```

A. \n
B. Program could not be compiled, thus no output
Answers to Output Questions

• Q1 B
• Q2 A
• Q3 B
• Q4 A
• Q5 A
• Q6 B
• Q7 B
• Q8 A
• Q9 B