Assignment 62: What are the Console Input / Output Functions in C and what are the types?

Console Input/Output (I/O) functions in C are used to interact with the user via the command-line interface (CLI). These functions allow reading input from the keyboard and writing output to the console screen. Here are the main types of console I/O functions in C:

1. **Unformatted Input/Output Functions**:
   - These functions deal with raw input/output without any specific formatting. They typically read or write individual characters or strings without considering formatting options.
   - Examples:
   - `getchar()`: Reads a single character from the standard input.
   - `putchar()`: Writes a single character to the standard output.
   - `gets()`: Reads a string from the standard input (deprecated due to security concerns).
   - `puts()`: Writes a string to the standard output followed by a newline character.

2. **Formatted Input/Output Functions**:
   - These functions handle input and output with specific formatting options. They allow for more control over how data is read from or written to the console.
   - Examples:
   - `scanf()`: Reads formatted input from the standard input.
   - `printf()`: Writes formatted output to the standard output.

3. **Character Input/Output Functions**:
   - These functions specifically deal with individual characters for input/output operations.
   - Examples:
   - `getchar()`: Reads a single character from the standard input.
   - `putchar()`: Writes a single character to the standard output.
   - `getche()`: Similar to `getchar()`, but echoes the input character to the screen immediately.

4. **String Input/Output Functions**:
   - These functions handle strings (sequences of characters) for input/output operations.

- Examples:
- `gets()`: Reads a string from the standard input (deprecated).
- `fgets()`: Reads a string from the standard input with specified buffer size (safer alternative to `gets()`).
- `puts()`: Writes a string to the standard output followed by a newline character.

These are the main types of console input/output functions in C, categorized based on the type of data they handle and the formatting options they provide. Each type serves different purposes and can be used depending on the requirements of the program.