Problem Solving With C - UE24CS151B

Single character Input Output

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Few points to discuss !!

- Storing more than one value in single variable of primitive type - Possible?

- Code for Real World applications developed by one person or by a Team?

- You Tube code is written in one language and that code is available in one file?

- Character refers to a single input - Occupies a single byte.

- English alphabets A as 65, B as 66, Z as 90, a as 97 and so on in a coding scheme called ASCII.

- C treats all the devices as files. Following three files are automatically opened when a program executes to provide access to the keyboard and screen.

Standard File	File Pointer	Device
Standard Input	stdin	Keyboard
Standard Output	stdout	Screen
Standard Error	stderr	Screen

- **Approaches:**

  - **scanf and printf** – Formatted IO functions

  - **getchar and putchar** - Commonly used in console applications or loops for handling text input and output efficiently
    - The getchar reads a single character from the standard input (stdin) and returns it as an int, allowing it to handle **ASCII values** or detect **EOF (End of File)**. It waits for the user to press **Enter** before processing the input.
    - putchar() is used to print a single character to the standard output (stdout). It takes a character as an argument and displays it on the screen, making it useful for character-by-character output.

- **Coding examples**

- **Approaches:**

  - **getc() and putc()**

    - getc reads a character from an input stream and returns the corresponding

      integer value on success. It returns EOF on failure.

      int getc(FILE *stream)

    - putc writes a character into a file

      int putc(int character, FILE *stream)

- **Coding examples**

- **Approaches: Non-standard IO functions**

    - **getch() and getche()** - Reads a character from the keyboard and copies it into memory area. getch() function, the typed character will not be echoed(displayed) on the screen and in getche() function the typed character will be echoed(displayed) on the screen.

    - putch() - Outputs a character stored in the memory using a variable on the output screen.

- **Coding examples**

THANK YOU

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