Assignment 66: What is the use of the functions viz. getch(), getche() and getchar() ?

The functions getch(), getche(), and getchar() are all used for reading a single character from the standard input (usually the keyboard) in C programming. However, they differ slightly in their behavior. Here's an explanation of each function along with examples:

❖ getch():

● The getch() function is commonly used in older versions of C and is often provided by compilers for compatibility with legacy code. It reads a single character from the standard input without echoing it to the screen.

Example:

```c
#include <conio.h> // Required header for getch() function

int main() {
    char ch;
    printf("Press any key: ");
    ch = getch();
    printf("\nThe key pressed is: %c\n", ch);
    return 0;
}
```

● In this example, the program prompts the user to press any key. The getch() function reads a single character from the keyboard without displaying it on the screen, and the character is then printed to the console.

❖ getche():

● The getche() function is similar to getch() but echoes the input character to the screen immediately after it is pressed.

Example:

```
#include <conio.h> // Required header for getche() function

int main() {
    char ch;
    printf("Press any key: ");
    ch = getche();
    printf("\nThe key pressed is: %c\n", ch);
    return 0;
}
```

- In this example, the program prompts the user to press any key. The getche() function reads a single character from the keyboard and displays it on the screen immediately. Then, the character is printed to the console.
❖ getchar():

- The getchar() function reads a single character from the standard input and echoes it to the screen. Unlike getch() and getche(), getchar() requires the user to press Enter after inputting the character.

Example:

```
int main() {
    char ch;
    printf("Press any key and then Enter: ");
    ch = getchar();
    printf("\nThe key pressed is: %c\n", ch);
    return 0;
}
```

- In this example, the program prompts the user to press any key and then press Enter. The getchar() function reads a single character from the keyboard, echoes it to the screen, and waits for the user to press Enter. Then, the character is printed to the console.

Overall, these functions are useful for reading single characters from the keyboard in C programs, and the choice between them depends on whether or not you want the input character to be echoed to the screen immediately.