C-Programming / **Switch_Programs.md** ⧉   ⋯

Rajiv-0920   initial files   18 minutes ago   ⋯   🕒

116 lines (90 loc) · 4.01 KB

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Switch Case Statement

1. Compute the following:

1. Factorial of a number
2. Prime or not
3. Odd or even
4. Exit

Once a menu item is selected the appropriate action should be taken and once this action is finished, the menu should reappear. Unless the user selects the 'Exit' option the program should continue to run.

Hint: Make use of an infinite while and a switch statement.

> Test Data

```
Enter a character: (Factorial 'f' Prime 'p' Even or Odd 'e' or Exit ''): f

Enter a number: 5
Factorial = 120
Enter a character: (Factorial 'f' Prime 'p' Even or Odd 'e' or Exit ''): p

Enter a number: 15

Not a Prime Number
Enter a character: (Factorial 'f' Prime 'p' Even or Odd 'e' or Exit ''): t
```

> Source Code

```c
#include <stdio.h>

int main(){
    char ch;
    int a = 1, flag = 1, num, fact = 1;

    while(a){
        printf("\nEnter a character:
        (Factorial 'f' Prime 'p' Even or Odd 'e' or Exit ''): ");
        scanf(" %c", &ch);
```

```c
    switch(ch){
        case 'f':
                printf("\nEnter a number: ");
                scanf("%d", &num);

                for(int i = num; i >= 1; i--){
                    fact *= i;
                }

                printf("Factorial = %d", fact);
                break;
        case 'p':
                printf("\nEnter a number: ");
                scanf("%d", &num);

                for(int i = 2; i <= num / 2; i++){
                    flag = 1;
                    if(num % i == 0){
                        flag = 0;
                        break;
                    }
                }

                if(flag == 1){
                    printf("\nPrime Number");
                } else {
                    printf("\nNot a Prime Number");
                }
                break;
        case 'e':
                printf("\nEnter a number: ");
                scanf("%d", &num);

                if(num % 2 == 0){
                    printf("\nEven Number");
                } else{
                    printf("\nOdd Number");
                }
                break;
        default:
            a = 0;
    }
    }
    return 0;
}
```

Hi 👋, I'm Rajiv Kumar

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