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Mastering Embedded System

Online Diploma

Learn In Depth

assignment

home work 2

unit 2 lectaure 3 c basics

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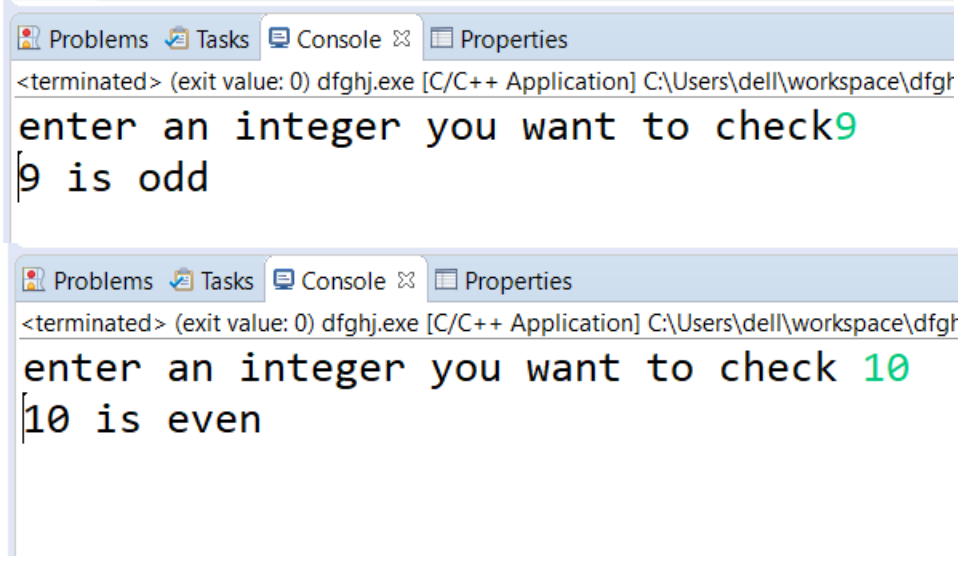
EX1: Write C Program to Check Whether a Number is Even or Odd

```c
#include <stdio.h>
int main() {
    int x ;
    printf ("enter an integer you want to check");
    fflush (stdout) ;
    scanf("%d", &x );
    if (x % 2 == 0){
        printf("%d is even" , x);
    }else {
        printf("%d is odd" , x);
    }
    return 0;
}
```



*main.c

```c
#include <stdio.h>
int main() {
    char x ;
    printf("enter your character");
    fflush (stdin); fflush(stdout);
    scanf("%c" ,&x);
    switch (x)
    {
    case 'A':
    case 'a':
    {
        printf("%c is a vowel",x);

    }
    break;
    case 'E':
    case 'e':
    {
        printf("%c is a vowel",x);
    }
    break;
    case 'I':
    case 'i':
    {
        printf("%c is a vowel",x);
    }
    break;
    case 'O':
    case 'o':
    {
        printf("%c is a vowel",x);
    }
    break;
    case 'U':
    case 'u':
    {
        printf("%c is a vowel",x);
    }
    break;
    default:
        printf("%c is a consonant",x);
        break;
    }
    return 0;
}
```

Output 1 , 2

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Users\dell\w

```
enter your characterd
d is a consonant
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Users\dell\workspace\

```
enter your characterI
I is a vowel
```

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EX3:C Program to Find the Largest Number Among Three Numbers

main.c

```c
#include <stdio.h>
int main() {
    float x ,y ,z ;
    printf("enter your three numbers");
    fflush (stdin); fflush(stdout);
    scanf("%f %f %f" ,&x , &y ,&z);
    if (x > y && x>z){
        printf("largest number : %f",x);
    }
    else if (y > x && y>z){
        printf("largest number :%f",y);
    }else{
        printf("largest number : %f",z);
    }
    return 0;
}
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Users\dell\workspace\dfgh

```
enter your three numbers25
20
30
largest number : 30.000000
```

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EX4: C Program to Check Whether a Number is Positive or Negative

main.c

```c
#include <stdio.h>
int main() {
    float x  ;
    fflush (stdin); fflush(stdout);
    printf("enter your number");
    fflush (stdin); fflush(stdout);
    scanf("%f" ,&x );
    if (x < 0){
        printf("%f is negative",x);
    }
    else if (x > 0){
        printf("%f is positive",x);
    }else{
        printf("you entered zero");
    }
    return 0;
}

```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Users\dell\workspace\dfghj\Debug\c

```
enter your number0
you entered zero
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Use

```
enter your number-22
-22.000000 is negative
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:

```
enter your number22
22.000000 is positive
```

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EX5: C Program to Check Whether a Character is an Alphabet or not

*main.c

```c
#include <stdio.h>
int main() {
    char x  ;
    fflush (stdin); fflush(stdout);
    printf("enter your ch");
    fflush (stdin); fflush(stdout);
    scanf("%c" ,&x );
    if (x >= 65 && x <= 90)
    {
        printf("%c is an alphabet" , x);
    }
    else if (x >= 97 &&  x <= 122){
        printf("%c is an alphabet" , x);
    }else {
        printf("is not an alphabet");
    }
    return 0;
```

Note

a-z(%c) =65-90 (%d)

A-Z(%c) =97-122 (%d)

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application]

```
enter your chz
z is an alphabet
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Users\dell\w

```
enter your ch11
is not an alphabet
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\

```
enter your chA
A is an alphabet
```

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EX6: C Program to Calculate Sum of Natural Numbers

*main.c

```c
#include <stdio.h>
int main() {
    int x ,sum = 0 , i ;
    fflush (stdin); fflush(stdout);
    printf("enter your ch");
    fflush (stdin); fflush(stdout);
    scanf("%d" ,&x );
    for (i = 0 ; i <= x ; i++)
    {

        sum =sum + i ;

    }
    printf("sum = %d" , sum);
    return 0 ;

}
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Users\dell\workspace\dfghj\Debug\dfghj.exe (3/28/

```
enter your ch5
sum = 15
```

EX7: C Program to Find Factorial of a Number

main.c

```c
#include <stdio.h>
int main() {
    int x ,factorial = 1 , i ;
    fflush (stdin); fflush(stdout);
    printf("enter your num");
    fflush (stdin); fflush(stdout);
    scanf("%d" ,&x );
    if (x > 0){
    for (i = 1 ; i <= x ; i++)
    {

        factorial =factorial * i ;

    }
    printf("sum = %d" , factorial);
    }else {
        printf("error! factorial of negative number doesn't exist");
    }
    return 0 ;
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Users\dell\workspace\dfghj\Debug\dfghj.exe (3/28/23, 3:14 AM)

```
enter your num-2
error! factorial of negative number doesn't exist
```

Problems Tasks Console Properties

<terminated> (exit value: 0) dfghj.exe [C/C++ Application] C:\Us

```
enter your num4
sum = 24
```

Activ

Ex 8 :

```c
#include <stdio.h>
int main() {
    float x ,y   ;
    char z;
    fflush (stdin); fflush(stdout);
    printf("enter your one of operator (+,-,*,/)");
    fflush (stdin); fflush(stdout);
    scanf("%c" , &z );
    printf ("enter two operand");
    fflush (stdin); fflush(stdout);
    scanf("%f %f" ,&x ,&y );
    switch (z){
    case '+' :
        printf("%f + %f= %f" , x,y,x+y);
        break ;
    case '-' :
        printf("%f - %f = %f" , x,y,x-y);
        break ;
    case '*' :
        printf("%f * %f = %f" , x,y,x*y);
        break ;
    case '/' :
        printf("%f / %f = %f" , x,y,x/y);
        break ;
    default:
            printf("enter right operator");
            break;
```

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```
    }
    return 0 ;

}
```

Programiz
C Online Compiler

main.c

Run

Output

```
10      fflush (stdin); fflush(stdout);
11      scanf("%f %f" ,&x ,&y );
12      switch (z){
13      case '+' :
14          printf("%f + %f= %f" , x,y,x+y);
15          break ;
16      case '-' :
17          printf("%f - %f = %f" , x,y,x-y);
18          break ;
19      case '*' :
20          printf("%f * %f = %f" , x,y,x*y);
21          break ;
22      case '/' :
23          printf("%f / %f = %f" , x,y,x/y);
24          break ;
25      default:
26              printf("enter right operator");
27              break;
28      }
29
30
31      return 0 ;
32
33  }
```

```
/tmp/uiRCJDjMg5.o
enter your one of operator (+,-,*,/)+
enter two operand2
2
2.000000 + 2.000000= 4.000000
```

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