

C Programming

Day 7

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C Programming Basics

- ▶ Commenting
- ▶ Working with Variables
- ▶ Basic Data Types
- ▶ Conversion Specifiers
- ▶ escape sequence
- ▶ Working with Arithmetic Expression
- ▶ Integer Arithmetic and Unary Minus Operator
- ▶ The Modulus Operator % %%
- ▶ Integer and floating Point conversions

Illustrating the Modulus Operator

```
int a = 25, b = 5, c = 10, d = 7;
```

```
a % b = 0
```

```
a % c = 5
```

```
a % d = 4
```

```
a / d * d + a % d = 25
```

Illustrating the Modulus Operator

```
/* Illustrating the Modulus Operator */
```

```
#include <stdio.h>
```

```
int main(){
```

```
    int a = 25, b = 5, c = 10, d = 7;
```

```
    printf("a %% b = %i\n", a % b );
```

```
    printf("a %% c = %i\n", a % c );
```

```
    printf("a %% d = %i\n", a % d );
```

```
    printf("a / d * d + a %% d = %i\n",  
           a / d * d + a % d );
```

```
    return 0;
```

```
}
```

Escape sequence

He said - "let's go on a Hike."

Escape sequence

```
/* Illustrating Escape sequence */
```

```
#include <stdio.h>
```

```
int main(){
```

```
    printf("He said - \"Let's go on a Hike.\\\"")
```

```
    return 0;
```

```
}
```

Converting between Integers and Floats

//Basic Conversions in C

```
#include <stdio.h>
```

```
int main(){  
    float f1 = 123.125, f2;  
    int i1, i2 = -150;  
    char c = 'a';
```

```
i1 = f1;           //floating to integer conversion  
printf("%f assigned to an int produces %i\n",f1,i1)
```

Converting between Integers and Floats

//Basic Conversions in C

```
#include <stdio.h>
```

```
int main(){  
    float f1 = 123.125, f2;  
    int i1, i2 = -150;  
    char c = 'a';
```

```
f1 = i2;           //integer to floating conversion  
printf("%i assigned to a float produces %f\n", i2, f1
```


Converting between Integers and Floats

//Basic Conversions in C

```
#include <stdio.h>
```

```
int main(){  
    float f1 = 123.125, f2;  
    int i1, i2 = -150;  
    char c = 'a';
```

```
f1 = i2 / 100; //integer divided by integer  
printf("%i divided by 100 produces %f\n", i2, f1);
```

Converting between Integers and Floats

//Basic Conversions in C

```
#include <stdio.h>
```

```
int main(){  
    float f1 = 123.125, f2;  
    int i1, i2 = -150;  
    char c = 'a';
```

```
f2 = i2 /100.0; //integer divided by float  
printf("%i divided by 100.0 produces %f\n",i2,f2);
```

Converting between Integers and Floats

//Basic Conversions in C

```
#include <stdio.h>
```

```
int main(){  
    float f1 = 123.125, f2;  
    int i1, i2 = -150;  
    char c = 'a';
```

```
f2 = (float) i2 / 100; //typecast operator  
printf("(float) %i dvided by 100 produces %f\n",
```

Converting between Integers and Floats

123.125000 assigned to an int produces 123

-150 assigned to a float produces -150.000000

-150 divided by 100 produces -1.000000

-150 divided by 100.0 produces -1.500000

(float) -150 divided by 100 produces -1.500000

Arithmetic Expression

Write a program that converts 27 deg from degrees to fahrenheit.