```
// double slash is comment
// name, date, purpose

#include <stdio.h>

int main()
{
    int p,n; //p is principle, n is number of years
    float r, si; // r is interest rate, si is calc amt of simple interest
    p = 10000; 20,000;  #Chaging values requires reprogramming
    r = 5.;
    n = 3; 10;
    si = p*n*r/100;
    printf("%f", si);
    return 0;
}
```

p	10000
n	3
r	5.0
si	1500.0

$20,000 @ 5% for 10 yrs

10000.000000

200000

100000

This whiteboard for previous class

format specifiers

%f float

%lf double — letter L

%d integer (decimal)

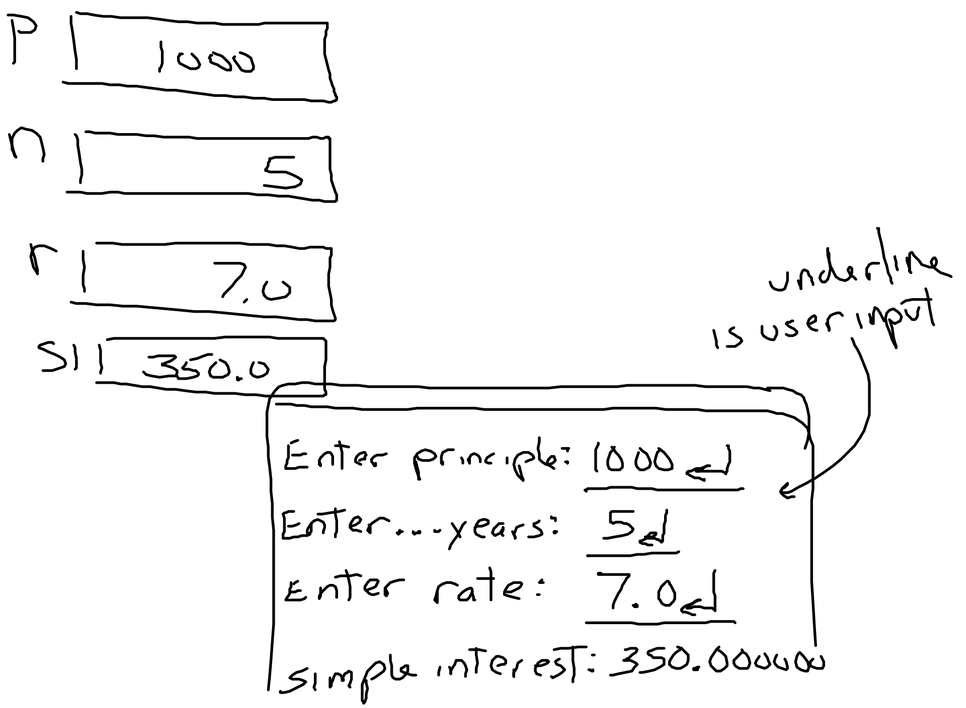
%X or %x integer (hex A-F, a-f)

%o " (octal)

%b " (binary in ATMEL maybe VS)

This whiteboard from previous class

```
// P.Viall - interest calc 9/16/2019
#define _CRT_SECURE_NO_WARNINGS
    sp →↵
#include <stdio.h>
int main()
{
    int p, n;
    float r, si;
    printf("Enter principle: ");
    scanf("%d", &p);
    printf("Enter number of years: ");
    scanf("%d", &n);
    printf("Enter rate: ");
    scanf("%f", &r);
    si = p*n*r/100;
    printf("Simple interest is %f", si);
    return 0;
}
```



details on types

int - 32 bits (4 bytes) - 2 bill → +2 bill
unsigned int 32 bits, 4 bytes 0 → 4 bill
} PC's

float
double
} always signed
no modifiers

int32_t
uint32_t
} signed / unsigned 32 bit int

int8_t
uint8_t
int16_t
uint16_t
int64_t
uint64_t

Arithmetic operations

\+ - * / % ← mod or modulo (only works with ints)

expression	value
6 + 2	8
6 * 2 + 3	15
6 + 2 * 3	12
(6 + 2) * 3	24
13 % 5	3
21 % 5	1
6 + 7 % 3	7

exp	val
6.0 / 2.0	3.0
31.0 / 2.0	15.5
31 / 2	15
9 / 10	0
29 / 10	2

+ - * /

i * i => i

i * f, f * i, f * f => f

d * i, i * d, d * f, f * d, d * d => d

exp	val
31.0 / 2	15.500...
9 / 5	1
9.0 / 5.0	1.8