

Sizes of Types, and Using scanf

Sizes of Types

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

```
int main( void )
```

```
{
```

```
    printf("size of char = %d\n", sizeof(char));
```

```
    printf("size of short = %d\n", sizeof(short));
```

```
    printf("size of int = %d\n", sizeof(int));
```

```
    printf("size of long = %d\n", sizeof(long));
```

```
    printf("size of float = %d\n", sizeof(float));
```

```
    printf("size of double = %d\n", sizeof(double));
```

```
}
```

size of char = 1

size of short = 2

size of int = 4

size of long = 4

size of float = 4

size of double = 8

Press any key to continue . . .

scanf

- Getting input from a user.

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

```
int main( void )
```

```
{
```

```
    int a, b, sum;
```

```
    float a2, b2, sum2;
```

```
    double a3, b3, sum3;
```

```
    printf("enter two integers, and I will print out their sum:\n");
```

```
    scanf("%d %d", &a, &b);
```

```
    sum = a+b;
```

```
    printf("a + b = %d\n\n", sum);
```

```
    printf("enter two real numbers, and I will print out their sum:\n");
```

```
    scanf("%f %f", &a2, &b2);
```

```
    sum2 = a2+b2;
```

```
    printf("a2 + b2 = %f\n", sum2);
```

```
    printf("enter two real numbers, and I will print out their sum:\n");
```

```
    scanf("%lf %lf", &a3, &b3);
```

```
    sum3 = a3+b3;
```

```
    printf("a3 + b3 = %lf\n", sum3);
```

```
}
```

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

```
int main( void )
```

```
{
```

```
    double number, square;
```

```
    printf("enter a real number, and I will print out its square:\n");
```

```
    scanf("%lf", &number);
```

```
    square = number * number;
```

```
    printf("the square of %lf is %lf\n", number, square);
```

```
}
```

Using scanf

- To read variables of type int, use %d.
- To read variables of type float, use %f.
- To read variables of type double, use %lf.
- Note that, when you specify the variable, YOU PUT & in front of the variable.
 - This is different than printf, where you do not put &.