

Introduction - Overview

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- 1 Introduction
 - Overview

Ex1

```
#include <stdio.h>

main(void) {

    int a, b, c;
    int mean;

    a = 40;
    b = 50;
    c = 60;

    mean = (a+b+c) / 3;

    printf("a= %d \n", a);
    printf("b= %d \n", b);
    printf("c= %d \n", c);
    printf("mean= %d \n", mean);

}
```

a= 40
b= 50
c= 60
mean= 50

```
#include <stdio.h>

main(void) {

    int a, b, c;
    float mean;

    a = 45;
    b = 53;
    c = 63;

    mean = (a+b+c) / 3.0;

    printf("a= %d \n", a);
    printf("b= %d \n", b);
    printf("c= %d \n", c);
    printf("mean= %f \n", mean);

}
```

```
a= 45
b= 53
c= 63
mean= 53.666668
```

Ex3

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

```
main(void) {
```

```
    int a, b, c;  
    float mean;
```

```
    a = 45;
```

```
    b = 53;
```

```
    c = 63;
```

```
    mean = (a+b+c) / 3.0;
```

```
    printf("&a= \t %p \n", &a);
```

```
    printf("&b= \t %p \n", &b);
```

```
    printf("&c= \t %p \n", &c);
```

```
    printf("&mean= \t %p \n", &mean);
```

```
}
```

```
&a=                0xbf9c708c
```

```
&b=                0xbf9c7088
```

```
&c=                0xbf9c7084
```

```
&mean=            0xbf9c7080
```

Ex4

```
#include <stdio.h>

main(void) {

    int a, b, c;
    float mean;

    a = 45;
    b = 53;
    c = 63;

    mean = (a+b+c) / 3.0;

    printf("&a= \t %p *(&a)= %d \n", &a, *(&a));
    printf("&b= \t %p *(&b)= %d \n", &b, *(&b));
    printf("&c= \t %p *(&c)= %d \n", &c, *(&c));
    printf("&mean= \t %p *(&mean)= %f \n", &mean, *(&mean));

}
```

```
&a=      0xbfabce0c *(&a)= 45
&b=      0xbfabce08 *(&b)= 53
&c=      0xbfabce04 *(&c)= 63
```

Ex5

```
#include <stdio.h>

main(void) {

    int a, b, c;
    float mean;
    int *p;

    a = 45;
    b = 53;
    c = 63;

    mean = (a+b+c) / 3.0;

    p = &a;

    printf("&a= \t %p a= %d \n", &a, a);
    printf("&p= \t %p p= %p *p= %d\n", &p, p, *p);

    *p = 55;

    printf("&a= \t %p a= %d \n", &a, a);
    printf("&p= \t %p p= %p *p= %d\n", &p, p, *p);
```

```
main (void)
{
    int a, b, c;
    int mean;

    a = 40;
    b = 50;
    c = 60;
    mean = (a + b + c) / 3;

    printf("The mean of three numbers \n");
    printf("a = %d \n", a);
    printf("b = %d \n", b);
    printf("c = %d \n", c);
    printf("mean (%d, %d, %d) => %d \n", a, b, c, mean);
}
```



```
#include <stdio.h>

void get_numbers (int *x, int *y, int *z)
{
    printf("Enter three numbers! \n");
    printf("a = "); scanf(" %d", x);
    printf("b = "); scanf(" %d", y);
    printf("c = "); scanf(" %d", z);
}

float compute_mean (int x, int y, int z)
{
    float avg;
    avg = (x + y + z) / 3.0;
    return( avg );
}

void print_numbers (int x, int y, int z, float avg)
{
    printf("The mean of three numbers \n");
    printf(" a = %d \n b = %d \n c = %d \n", x, y, z);
    printf("mean (%d, %d, %d) => %f \n", x, y, z, avg );
}
```

```
main (void)
{
    int a, b, c;
    float mean;

    get_numbers(&a, &b, &c);

    mean = compute_mean(a, b, c);

    print_numbers(a, b, c, mean);
}
```

Enter three numbers!

a = 1

b = 2

c = 3

The mean of three numbers

a = 1

b = 2

c = 3

mean (1, 2, 3) => 2.000000

```
#include <stdio.h>

void get_numbers (int *x, int *y, int *z);
float compute_mean (int x, int y, int z);
void print_numbers (int x, int y, int z, float avg);

main (void)
{
    int a, b, c;
    float mean;

    get_numbers(&a, &b, &c);

    mean = compute_mean(a, b, c);

    print_numbers(a, b, c, mean);

}
```

```
void get_numbers (int *x, int *y, int *z)
{
    printf("Enter three numbers! \n");
    printf("a = "); scanf(" %d", x);
    printf("b = "); scanf(" %d", y);
    printf("c = "); scanf(" %d", z);
}
```

```
float compute_mean (int x, int y, int z)
{
    float avg;

    avg = (x + y + z) / 3.0;

    return( avg );
}
```

```
void print_numbers (int x, int y, int z, float avg)
{
    printf("The mean of three numbers \n");
    printf(" a = %d \n b = %d \n c = %d \n", x, y, z);
    printf("mean (%d, %d, %d) => %f \n", x, y, z, avg );
}
```

Enter three numbers!

a = 1

b = 2

c = 3

The mean of three numbers

a = 1

b = 2

c = 3

mean (1, 2, 3) => 2.000000