

# Control - Examples

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- 1 Repeat
  - Control

# Ex1

```
#include <stdio.h>

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

    printf("Enter a: ");
    scanf("%d", &a);

    if (a > 0)
        printf("a is greater than 0\n");
    else
        printf("a is less than or equal to 0\n");

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

}
```

# Ex2

```
#include <stdio.h>

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

    printf("Enter a: ");
    scanf("%d", &a);

    if (a > 0) {
        printf("a > 0 : ");
        printf("a is greater than 0\n");
    }
    else {
        printf("a <= 0 : ");
        printf("a is less than or equal to 0\n");
    }

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

# Ex3

```
#include <stdio.h>

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

    printf("Enter a: ");
    scanf("%d", &a);

    if (a > 0)
        if (a > 10) printf("a > 10 \n ");
        else printf("0 < a <= 10 \n ");
    else
        printf("a <= 0 \n");

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

# Ex4

```
#include <stdio.h>

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

    printf("Enter a: ");
    scanf("%d", &a);

    if (a > 0)
        printf("a > 0 \n");
    else
        if (a < -10) printf("a < -10 \n ");
        else printf("-10 <= a <= 0 \n ");

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

# Ex5

```
#include <stdio.h>

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

    printf("Enter a: ");
    scanf("%d", &a);

    if (a > 0)
        if (a > 10)
            if (a > 20) printf("a > 20 \n ");
            else printf("10 < a <= 20 \n ");
            else printf("0 < a <= 10 \n ");
        else
            printf("a <= 0 \n");

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

# Ex6

```
#include <stdio.h>

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

    printf("Enter a: ");
    scanf("%d", &a);

    if (a > 0)
        printf("a > 0 \n");
    else
        if (a < -20) printf("a < -20 \n ");
        else
            if (a < -10) printf("-20 <= a < -10 \n ");
            else printf("-10 <= a <= 0 \n ");

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



# Ex7

```
include <stdio.h>

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

    printf("Enter a: ");
    scanf("%d", &a);

    switch (a) {
        case 10: printf("a = 10 \n");
                 break;
        case 20: printf("a = 20 \n");
                 break;
        default: printf("a is neither 10 nor 20 \n");
                 break;
    }

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

# Ex8

```
#include <stdio.h>

void main(void){

    int i;

    for (i=0; i<10; ++i) {
        printf("i=%d ", i);
        if ((i%2) == 0) {
            continue;
            printf("even \n");
        }
        else {
            printf("odd \n");
        }

        if (i==5) break;
    }

}
```

# Ex9 (1)

```
#include <stdio.h>

void main(void){

    int i;

    for (i=0; i<10; ++i) {
        printf("FOR: i=%d \n", i);
    }

    i=0;
    while (i<10) {
        printf("WHILE-post-update: i=%d \n", i);
        ++i;
    }

    i=0;
    while (i<10) {
        ++i;
        printf("WHILE-pre-update: i=%d \n", i-1);
    }
}
```

## Ex9 (2)

```
// ++i --i printf cautious
```

```
i=0;
do {
    ++i;
    printf("DO-WHILE-pre-update: i=%d \n", i-1);
} while (i<10);
```

```
i=0;
do {
    printf("DO-WHILE-post-update: i=%d \n", i);
    ++i;
} while (i<10);
```

```
}
```

# Ex10

```
#include <stdio.h>

void main(void){
    int i;

    puts("Enter the number:");
    scanf("%d", &i);
    printf("i=%d \n", i);

    switch ( i % 3 ) {
        case 0: printf("rem=0 \n"); break;
        case 1: printf("rem=1 \n"); break;
        case 2: printf("rem=2 \n"); break;
    }

    switch ( i % 3 ) {
        case 0:
        case 1: printf("rem=0 or 1 \n"); break;
        case 2: printf("rem=2 \n"); break;
    }

    printf("end of program\n");
}
```

# Ex11

```
#include <stdio.h>

void main(void){

    int i;
    char c;

    puts("enter one of A, B, C, D, F continuously");
    puts("to finish, enter EOF(^D)");

    while ( (c=getchar()) != EOF) {

        if (c == 'A') printf("%c is entered\n", c);
        if (c == 'B') printf("%c is entered\n", c);
        if (c == 'C') printf("%c is entered\n", c);
        if (c == 'D') printf("%c is entered\n", c);
        if (c == 'F') printf("%c is entered\n", c);

    }

}
```

# Ex12

```
#include <stdio.h>

void main(void){

    int i;
    char c;

    puts("enter one of A, B, C, D, F continuously");
    puts("to finish, enter EOF(^D)");

    while ( (c=getchar()) != EOF) {

        if (c == 'A') printf("%c is entered\n", c);
        else if (c == 'B') printf("%c is entered\n", c);
        else if (c == 'C') printf("%c is entered\n", c);
        else if (c == 'D') printf("%c is entered\n", c);
        else printf("%c is entered\n", c);

    }

}
```

# Ex13

```
#include <stdio.h>

void main(void){

    int i;
    char c;

    puts("enter one of A, B, C, D, F continuously");
    puts("to finish, enter EOF(^D)");

    while ( (c=getchar()) != EOF) {

        switch (c) {
            case 'A' : printf("%c is entered\n", c); break;
            case 'B' : printf("%c is entered\n", c); break;
            case 'C' : printf("%c is entered\n", c); break;
            case 'D' : printf("%c is entered\n", c); break;
            case 'F' : printf("%c is entered\n", c); break;
            default  : printf("%c invalid char\n", c); break;
        }

    }

}
```