

Introduction to C

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

```
int main(int argc, char * argv[]) {  
    printf("Hello World\n");  
}
```

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

```
int main(int argc, char * argv[]) {  
    char name[50];  
    printf("Enter your name: ");  
    scanf("%s", name);  
    printf("Hello %s\n", name);  
}
```

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

```
int main(int argc, char * argv[]) {  
    char name[50];  
    int count;  
    int i;  
    printf("How many are watching: ");  
    scanf("%d", &count);  
    i = 0;  
    while (i < count) {  
        printf("Enter one name: ");  
        scanf("%s", name);  
        printf("Hello %s\n", name);  
        i++;  
    }  
}
```

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

```
void sort(int n[], int size) {
    int i;
    int s;
    int p;
    int temp;

    for (p = 0; p < size - 1; p++) {
        s = p;
        for (i = p + 1; i < size; i++) {
            if (n[i] < n[s]) {
                s = i;
            }
        }
        temp = n[p];
        n[p] = n[s];
        n[s] = temp;
    }
}
```

```
int main(int argc, char * argv[]) {
    int numbers[30];
    int count;
    int i;
    printf("How many numbers will you enter: ");
    scanf("%d", &count);
    if (count > 30) {
        printf("You must enter a number between 1 and 30\n");
        exit(1);
    }
    printf("Enter %d number separated by white space: ", count);
    i = 0;
    while (i < count) {
        scanf("%d", &numbers[i]);
        i++;
    }
    sort(numbers, count);
    printf("The numbers in ascending order are\n");
    for (i = 0; i < count; i++) {
        printf("%d ", numbers[i]);
    }
    printf("\n");
}
```

```
void swap(int *i, int*j) {  
    int temp = *i;  
    *i = *j;  
    *j = temp;  
}
```

```
void sort(int n[], int size) {  
    int i;  
    int s;  
    int p;  
    int temp;  
  
    for (p = 0; p < size -1; p++) {  
        //printf("%d\n", p);  
        s = p;  
        for (i = p+1; i < size; i++) {  
            //printf("%d\n", i);  
  
            if (n[i] < n[s]) {  
                s = i;;  
            }  
        }  
        swap(&(n[p]), &(n[s]));  
    }  
}
```

```
void swap(int *i, int*j) {  
    int temp = *i;  
    *i = *j;  
    *j = temp;  
}
```

```
void sort(int n[], int size) {  
    int *i;  
    int *s;  
    int *p;  
  
    for (p = n; p < n+size -1; p++) {  
        s = p;  
        for (i = p+1; i < n + size; i++) {  
            if (*i < *s) {  
                s = i;;  
            }  
        }  
        swap(p, s);  
    }  
}
```



```
int main(int argc, char * argv[]) {
    int numbers[30];
    FILE *numfile = fopen("numbers.txt", "r");
    int i;
    int count;
    i = 0;
    while (!feof(numfile)) {
        fscanf(numfile, "%d", &numbers[i]);
        i++;
    }
    count = i;
    printf("sort\n");
    sort(numbers, count);
    printf("The numbers in ascending order are\n");
    for (i = 0; i < count; i++) {
        printf("%d ", numbers[i]);
    }
    printf("\n");
}
```

```
int main(int argc, char * argv[]) {
    int numbers[30];
    FILE *numfile = fopen("numbers.txt", "r");
    FILE *out = fopen("sorted.txt", "w");
    int i;
    int count;
    i = 0;
    while ((fscanf(numfile, "%d", &numbers[i])) != EOF) {
        i++;
    }
    count = i;
    printf("sort\n");
    sort(numbers, count);
    for (i = 0; i < count; i++) {
        fprintf(out, "%d\n", numbers[i]);
    }
}
```

```
int main(int argc, char * argv[]) {
    int numbers[30];
    FILE *numfile = fopen(argv[1], "r");
    FILE *out = fopen(argv[2], "w");
    int i;
    int count;
    i = 0;
    while ((fscanf(numfile, "%d", &numbers[i])) != EOF) {
        i++;
    }
    count = i;
    sort(numbers, count);
    for (i = 0; i < count; i++) {
        fprintf(out, "%d\n", numbers[i]);
    }
}
```