First attempt

```
for(i=0; i<n; i++)
{
 • Examine list[i] to list[n-1] and suppose that the smallest integer is at
   list[min];
 . Interchange list[i] and list[min];
}
```

Q) How to find the smallest integer ?

Q) How to interchange list[i] and list[min] ?

Swap function

```
void swap(int *x, int *y)
{ /* both parameters are pointers to ints */
  int temp= *x;
  *x= *y;
  *y= temp;
}
```

Macro version of swap

```
#define SWAP(x,y,t) ((t)=(x), (x)=(y) (y)=(t))
```

Works for any data type.

- We can solve the first subtask by assuming that the minimum is list[i], checking list[i] with list[i+1], list[i+2],....., list[n-1]. Whenever we find a smaller no, we make it the new min. When we reach list[n-1], we are done.
- The full version of the program is implemented on PC.

```
void sort(int list[], int n)
{
int i, j, min, temp;
for(i=0; i<n-1; i++)
{
min=i;
for(j=i+1; j<n; j++)
  if(list[j]<list[min])
     min=j;
SWAP(list[i], list[min], temp)
}
}
```

Does this work correctly ?