

```
void reverse ( )
```

```
{ struct node * prev, * current, * next;
```

```
  current = head
```

```
  prev = NULL NULL
```

```
  next = NULL
```

```
  while (current != NULL)
```

```
  { next = current->next
```

```
    current->next = prev
```

```
    prev = current
```

```
    current = next
```

```
  }
```

```
  head = prev
```

```
}
```

```
struct node * concatenate (struct node * start1, struct node * start2)
```

```
{ struct node * ptr
```

```
  if (start1 == NULL)
```

```
  { start1 = start2
```

```
    return start1 }
```

```
  if (start2 == NULL)
```

```
    return start1
```

```
  ptr = start1
```

```
  while (ptr->next != NULL)
```

```
    ptr = ptr->link
```

```
  ptr->link = start2
```

```
  return start1
```

```
}
```



```

void sort()
{
    int flag, i;
    struct node *ptr1, *ptr = NULL;
    if (head == NULL)
    {
        printf("List is Empty");
        return;
    }
    do
    {
        flag = 0;
        ptr1 = head;
        while (ptr1->next != ptr)
        {
            if (ptr1->data > ptr->data)
            {
                swap(ptr1, ptr);
                flag = 1;
            }
            ptr1 = ptr1->next; ptr = ptr1;
        }
        while (flag == 1)
        {
            printf("Swapped");
        }
    }
}

```

```

void swap(node *a, node *b)
{
    int temp = a->data;
    a->data = b->data;
    b->data = temp;
}

```



## Stack implementation

~~void push (struct node \*)~~

void push ( )

{ struct node \*new\_node = (struct node \*) malloc (sizeof (struct node))

new\_node → data = new\_item

new\_node → next = head

head = new\_node

}

void Pop ( )

{ struct node \*ptr

if (head == NULL)

print "List is Empty"

else

{ ptr = head

head = ptr → next

free (ptr)

print "Node deleted"

}

}



## Queue implementation

void Enqueue (int item)

```
{ struct node *ptr, *temp;
  ptr = (struct node *) malloc (sizeof (struct node));
  ptr->data = item;
  ptr->next = NULL;
  if (head == NULL)
  { head = ptr; }
  else
  { temp = head;
    while (temp->next != NULL)
    { temp = temp->next; }
    temp->next = ptr;
  }
}
```

void Dequeue ()

```
{ struct node *ptr;
  if (head == NULL)
    printf ("Linked List is Empty")
  else
  { ptr = head;
    ptr = head = ptr->next;
    free (ptr);
    printf ("Element deleted")
  }
}
```