// queue using linked list.

```
struct node{
  int data;
  struct node *next; };
void insert();
void display();
void del();
struct node *rear=NULL, *front=NULL;
int main(int argc, char **argv)
{
    int choice;
    do {
        printf("1. Create 2. Display 3. Delete 4. Exit\n");
        scanf("%d", &choice);
        switch(choice)
        {
          case 1: insert(); break
          case 2: display(); break
          case 3: del(); break;
          case 4: exit(0);
          default: exit(0);
        }
    } while (choice!=4);
}
void insert()
{
    struct node *newnode;
    newnode = (struct node*)malloc(sizeof(struct node));
    printf("enter the element\n");
    scanf("%d", &newnode->data);
    newnode->next = NULL;
    if(rear == NULL){ rear=newnode;
                      front=newnode;
                    }
    else { rear->next=newnode;
           rear=newnode;
         }
}
void del()
{
    if(front==NULL)
        printf("Queue is empty\n"); return;
```

```
else {  printf("Deleted dd is %d", front->data);
        if (front==rear)
        {  printf("Queue is empty \n");
           front=NULL; rear=NULL;
        } else
           front= front->next;
     }
}

void display()
{
   struct node *temp;
   if (front ==NULL){
         printf("Queue is empty
          return;
         }
     temp=front;
     while ( temp != NULL)
     {
        printf("%d", temp->data);
         temp = temp->next;
     }
}
```

```
// Stack using linked list.

void push();
 void pop();
 void display();
 struct node { int data;
               struct node *next;
             };
  struct node *top=NULL;

int main(int argc, char *argv)
   {  int choice;
      do{  printf("1.Push 2.Display 3.Pop 4.exit \n");
           scanf("%d",&choice);
          switch(choice)
              {  case1: push(); break;
                 case2: display(); break;
```

```
        case 3: pop(); break;
        case 4: exit(0);
        default: exit(0);
      }
    } while (choice!=4);
}

  void push()
{
      int item;
      struct ~~item~~ node *newnode;
      printf("enter the element\n");
      scanf("%d",&item);
      newnode = (struct node*) malloc( sizeof(struct node));
       newnode=>data= item;
       newnode->next = NULL;
        if(top==NULL)
              top=newnode;
        else
            newnode->next=top;
            top=newnode;
      }
void pop(){
            if(top==NULL)
                printf("Stack is empty");
            else {
                  printf("element removed = %d", top->data);
                  top =top->next;
                }
          }

void display()
{ struct node *temp;
   temp=top;
     if(top==NULL)
           printf("stack is empty");
     while( temp!=NULL)
      {printf("%d", temp->data);
          temp = temp-> next;
      }
}
```