Practical No.7

1) Implement a Circular Single Linked List (CSLL) and perform the operations: Create, Traverse, Insert_Beg, Insert_End, Delete_beg, Delete_end using Menu Driver Program.

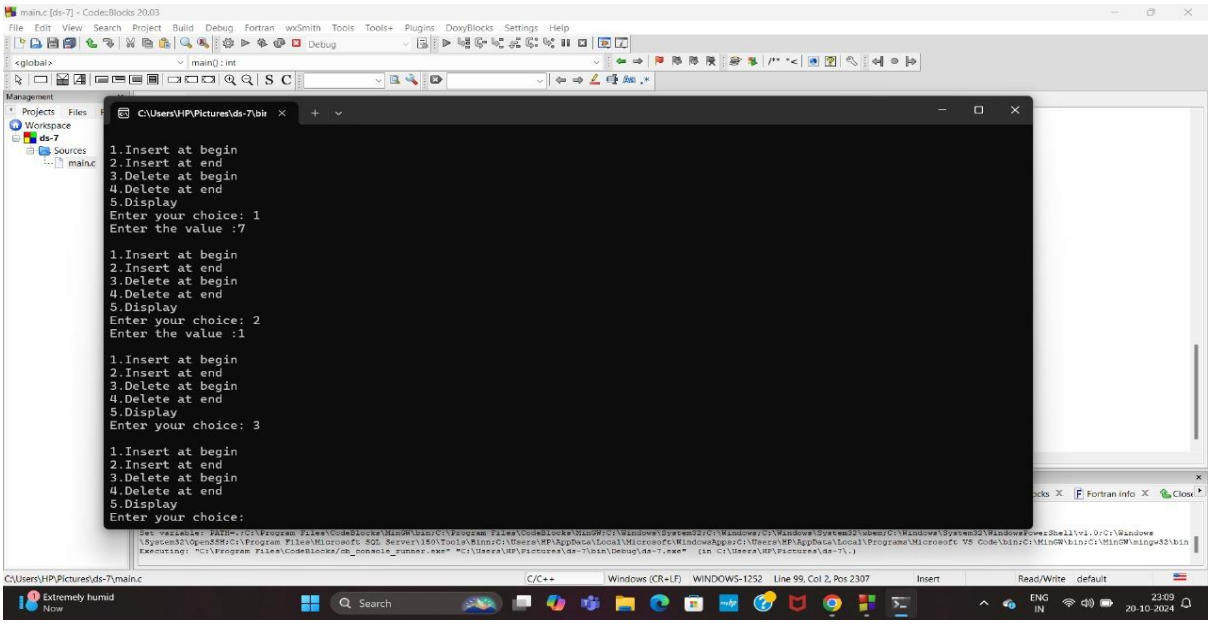
```
#include <stdio.h>
#include
<stdlib.h> struct
CLL{ int data;
struct CLL *next;
};
struct CLL *head=NULL;

void insertbeg(){
   struct CLL *new;
   new=(struct CLL*)malloc(sizeof(struct CLL));
   printf("Enter the value :");
   scanf("%d",&new->data); if(head==NULL){
   new->next=new; head=new;
      return;
   }
   struct CLL *temp=head;
   while(temp->next!=head){
   temp=temp->next;
   }
   new->next=head; temp-
   >next=new; head=new;
}
```

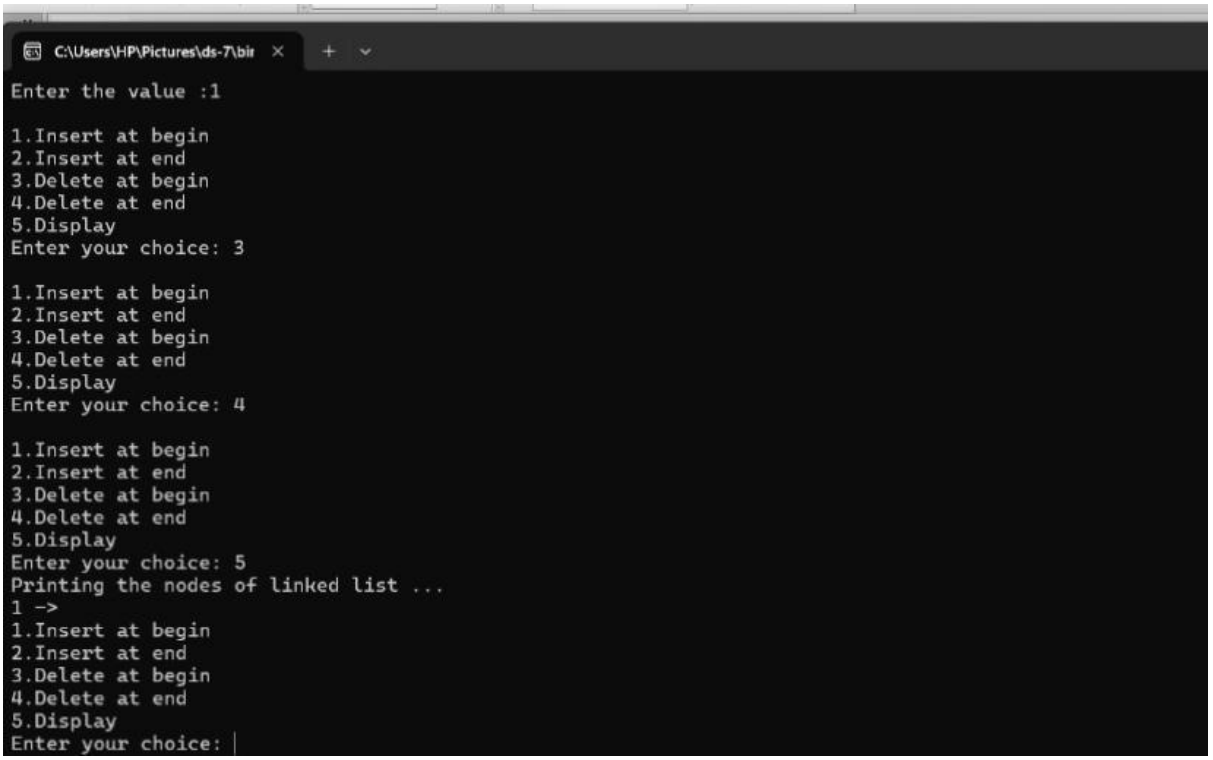
```
void insertend(){
   struct CLL *new;
   new=(struct CLL*)malloc(sizeof(struct CLL));
   printf("Enter the value :");
   scanf("%d",&new->data); if(head==NULL){
   new->next=new; head=new;
      return;
   }
   struct CLL *temp=head;
   while(temp->next!=head){
   temp=temp->next;
   }
   new->next=temp->next; temp-
   >next=new;
}
void deleteend(){
   if(head==NULL){
      printf("List is empty....");
      return;
   }
   struct CLL *temp=head;
   while(temp->next->next!=head){
   temp=temp->next;
   }
   temp->next=head;
}
void deletebeg(){
 if(head==NULL){
```

```
        printf("List is empty....");
        return;
    }
    struct CLL *temp=head;
    while(temp->next!=head){
    temp=temp->next;
    }
    head=head->next; temp-
    >next=head;
}
void display(){ printf("Printing the nodes of
    linked list ...\n");
    struct CLL* temp=head; do{
    printf("%d ->",temp->data);
    temp=temp->next;
    }while(temp!=head);
}
int main()
{
    int ch;
    while(1){
          printf("\n1.Insert at begin\n2.Insert at end\n3.Delete at begin\n4.Delete at
end\n5.Display\n"); printf("Enter
          your choice: ");
          scanf("%d",&ch); switch(ch)
          {
                case 1:insertbeg(); break; case
                2:insertend(); break; case
                3:deletebeg(); break; case
```

```
            4:deleteend(); break; case
            5:display(); break;
            default:printf("Invalid
            choice"); break;
        }
    }
    return 0;
}
```

- Output :-




C:\Users\HP\Pictures\ds-7\bin
Enter the value :1
1.Insert at begin
2.Insert at end
3.Delete at begin
4.Delete at end
5.Display
Enter your choice: 3
1.Insert at begin
2.Insert at end
3.Delete at begin
4.Delete at end
5.Display
Enter your choice: 4
1.Insert at begin
2.Insert at end
3.Delete at begin
4.Delete at end
5.Display
Enter your choice: 5
Printing the nodes of linked list ...
1 ->
1.Insert at begin
2.Insert at end
3.Delete at begin
4.Delete at end
5.Display
Enter your choice: