/*link list copy,reversal*/

```
#include<stdio.h>
#include<stdlib.h>
struct node
{
	int data;
	struct node *next;
};
struct node*head;
void beginsert();
void display();
void copy();
void reversal();
int main()
{
	int choice=0;
	while(choice!=5)
	{
		printf("**main menu**\n");
		printf("choose one option from the following list...\n");
		printf("1.insert in begining\n2.display\n3.copy a link list to another list\n4.reverse the link list\n5.exit\n");
		printf("enter your choice\n");
		scanf("%d",&choice);
		switch(choice)
		{
			case 1:beginsert();
			break;
			case 2:display();
			break;
			case 3:copy();
```

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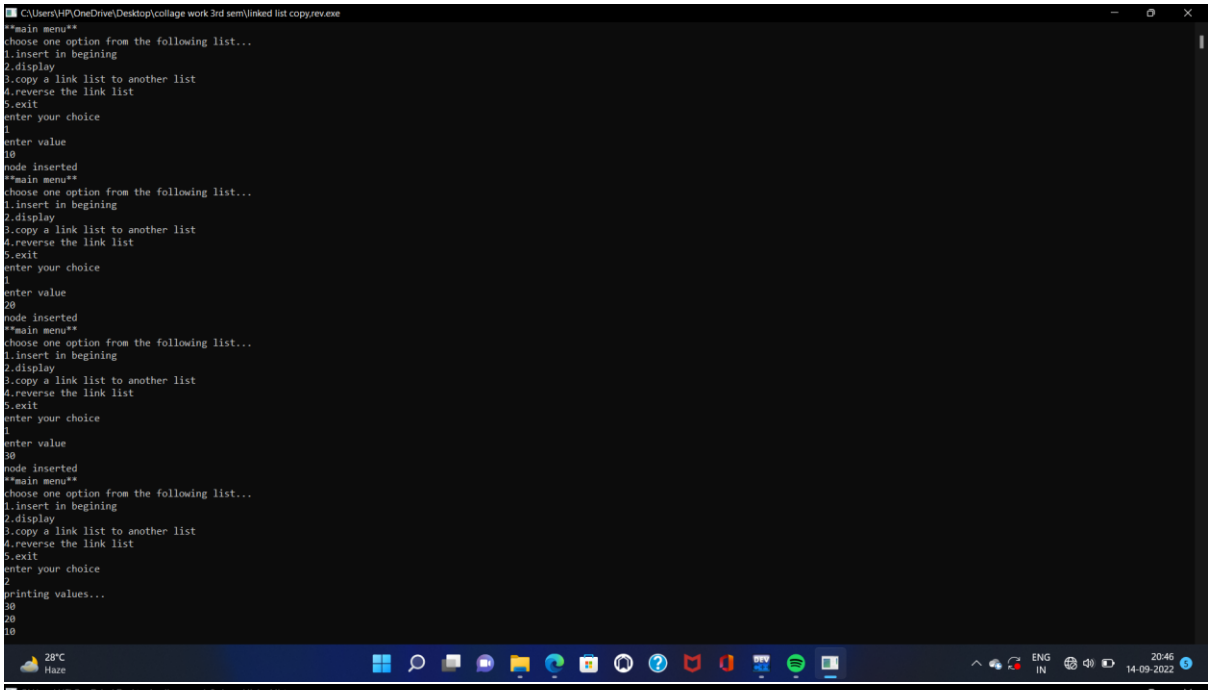
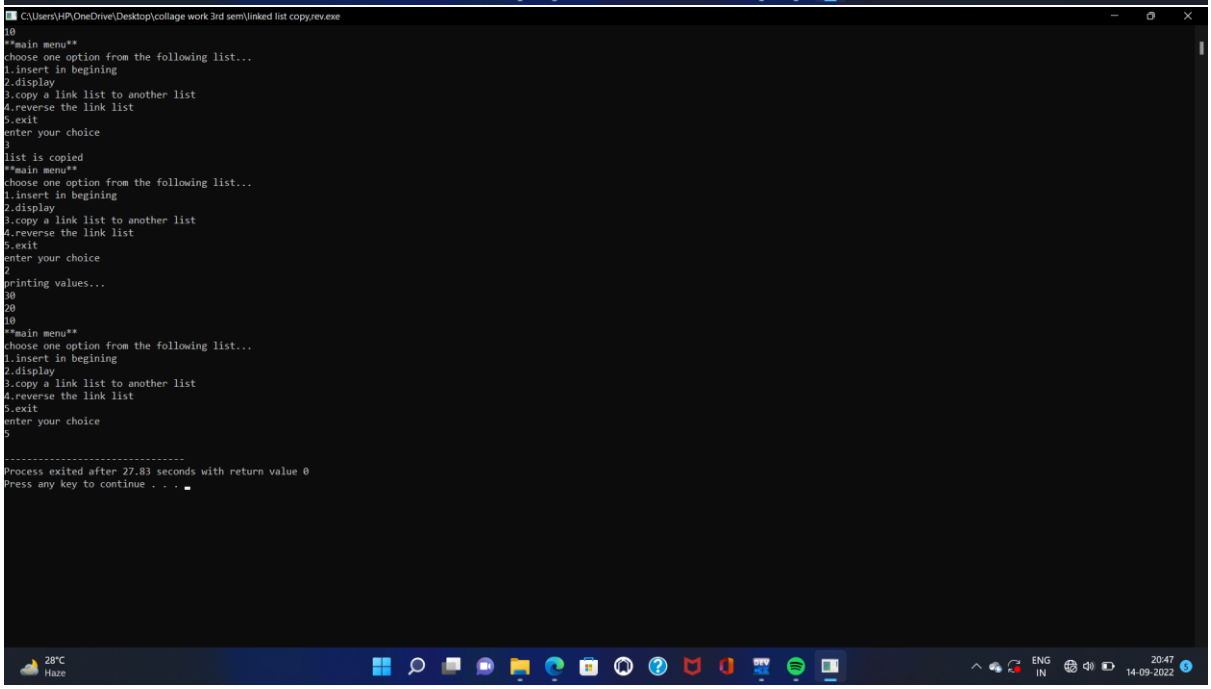
                        break;
                        case 4:reversal();
                        break;
                        case 5:exit(0);
                        break;
                        default:
                                printf("invalid choice\n");
                }
        }
}
void beginsert()
{
        struct node*ptr;
        int item;
        ptr=(struct node*)malloc(sizeof(struct node*));
        if(ptr==NULL)
        {
                printf("OVERFLOW\n");
        }
        else
        {
                printf("enter value\n");
                scanf("%d",&item);
                ptr->data=item;
                ptr->next=head;
                head=ptr;
                printf("node inserted\n");
        }
}
void display() //traversal
{
```

```
        struct node*ptr;
        ptr=head;
        if(ptr==NULL)
        {
                printf("nothing to print\n");
        }
        else
        {
                printf("printing values...\n");
                while(ptr!=NULL)
                {
                        printf("%d\n",ptr->data);
                        ptr=ptr->next;
                }
        }
}
void copy()
{
        struct node*ptr,*ptr1;
        struct node*head1;
        //head1=new_node;
        ptr=(struct node*)malloc(sizeof(struct node*));
        head1=(struct node*)malloc(sizeof(struct node*));
        ptr=head->next;
        head1->data=NULL;
        ptr1=head1;
        while(ptr!=NULL)
        {
                head1->data=ptr->data;
                ptr1->next=head1;
                ptr1=head1;
```

```
                ptr=ptr->next;
        }
        printf("list is copied\n");

}
void reversal()
{
        struct node*q,*r,*s;
        q=(struct node*)malloc(sizeof(struct node*));
        q=head->next;
        r=NULL;
        s=NULL;
        while(q!=NULL)
        {
                s=r;
                r=q;
                q=q->next;
                r->next=s;
        }
        head->next=r;
        printf("the list is reversed\n");
}
```


C:\Users\HP\OneDrive\Desktop\collage work 3rd sem\linked list copy.rev.exe
main menu
choose one option from the following list...
1.insert in begining
2.display
3.copy a link list to another list
4.reverse the link list
5.exit
enter your choice
1
enter value
10
node inserted
main menu
choose one option from the following list...
1.insert in begining
2.display
3.copy a link list to another list
4.reverse the link list
5.exit
enter your choice
1
enter value
20
node inserted
main menu
choose one option from the following list...
1.insert in begining
2.display
3.copy a link list to another list
4.reverse the link list
5.exit
enter your choice
1
enter value
30
node inserted
main menu
choose one option from the following list...
1.insert in begining
2.display
3.copy a link list to another list
4.reverse the link list
5.exit
enter your choice
2
printing values...
30
20
10
28°C
Haze
ENG
IN
20:46
14-09-2022


C:\Users\HP\OneDrive\Desktop\collage work 3rd sem\linked list copy.rev.exe
10
main menu
choose one option from the following list...
1.insert in begining
2.display
3.copy a link list to another list
4.reverse the link list
5.exit
enter your choice
3
list is copied
main menu
choose one option from the following list...
1.insert in begining
2.display
3.copy a link list to another list
4.reverse the link list
5.exit
enter your choice
2
printing values...
30
20
10
main menu
choose one option from the following list...
1.insert in begining
2.display
3.copy a link list to another list
4.reverse the link list
5.exit
enter your choice
5

Process exited after 27.83 seconds with return value 0
Press any key to continue . . .
28°C
Haze
ENG
IN
20:47
14-09-2022