Disha-B
1BM19CS050.

1)
```
struct node
{
  int data;
  struct node *next;
};
struct node *head= NULL;
int main(int argc, char **argv)
{
  int choice, ch;
  char ch;
  do
  { printf("\n 1. Create \n 2. Display \n 3. Insert
      _at_beginning \n 4. Insert_at_end \n
      5. Insert_at_middle.");
    print("\n Enter your choice :");
    scanf("%d",&choice);
    switch(choice)
    {
      case 1: create();
              break;
      case 2: display();
              break;
      case 3: insert_at_Beginning();
              break;
      case 4: insert_at_End;
              break;
      case 5: insert_at_middle;
              break;
    }
```


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```
    }while(choice != 6);
}

void create()
{
  struct node *newnode, *temp;
  int item;
  newnode = (struct node*) malloc(sizeof(struct node));
  printf("Enter the data:");
  scanf("%d", &item);
  newnode->data = item;
  if(head == NULL)
  {
    newnode->next = NULL;
    head = newnode;
    printf("Node created\n");
  }
  else
  {
    temp = head;
    while(temp->next != NULL)
    {
      temp = temp->next;
    }
    temp->next = newnode;
    newnode->next = NULL;
    printf("Node created\n");
  }
}
void display()
{
  struct node *ptr = NULL;
  ptr = head;
  if(ptr == NULL)
```

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```
    {
        printf("Nothing to print\n");
    }
    else
    {
        while(ptr!=NULL)
        {
            printf("%d",ptr->data);
            ptr=ptr->next;
        }
    }
}
void insert_at_beginning()
{
    struct node *newnode;
    int ele;
    printf("Enter the element:");
    scanf("%d",&ele);
    newnode=(struct node*)malloc(sizeof(struct node));
    newnode->data=ele;
    newnode->next=head;
    head=newnode;
}
void insert_at_End()
{
    struct node *newNode, *temp;
    int ele;
    printf("enter the element:");
    scanf("%d",&ele);
    newNode=(struct node*)malloc(sizeof(struct node));
    newNode->data=ele;
    newNode->next=NULL;
    temp=head;
```


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while(temp != NULL && temp->next != NULL).
temp = temp->next;
temp->next = newNode;
}
void insert_at_Middle()
{
  struct node *newNode, *temp;
  int ele, position;
  printf("enter the element:");
  scanf("%d", &ele);
  printf("enter the position to be inserted:");
  scanf("%d", &position);
  newNode=(struct node*)malloc(sizeof(struct node));
  newNode->data = ele;
  newNode->next = NULL;
  temp = head;
  for(int i=2; i<=position-1; i++)
  {
    temp = temp->next;
    if(temp==NULL)
      break;
    } if(temp != NULL)
    {
      newNode->next = temp->next;
      temp->next = newNode;
    }
  }
```

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