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#include<stdio.h>
#include<stdlib.h>
#include<string.h>
struct node
{
    int id;
    char name[20];
    char br[20];
    char asp[20];
    struct node *llink,*rlink;
};

typedef struct node *NODE;

NODE getnode()
{
    NODE temp;
    temp=(NODE)malloc(sizeof(struct node));
    printf("enter employee details");
    printf("\nenter id,name,branch,areaofSpecialisation:\n");
    scanf("%d",&temp->id);
    scanf("%s",temp->name);
    scanf("%s",temp->br);
    scanf("%s",temp->asp);
    temp->llink=temp->rlink=NULL;
    return temp;
}

NODE insertfront(NODE first)
{
    NODE newnode;
    newnode=getnode();
    if(first==NULL)
        return newnode;
    newnode->rlink=first;
    first->llink=newnode;
    return newnode;
}

NODE insertrear(NODE first)
{
    NODE newnode,cur;
    newnode=getnode();
    if(first==NULL)
        return newnode;
    cur=first;
    while(cur->rlink!=NULL)
        cur=cur->rlink;
    cur->rlink=newnode;
    newnode->llink=cur;
    return first;
}

NODE deletefront(NODE first)
{
    NODE temp;
    if(first==NULL)
    {
        printf("\nlist is empty");
        return;
    }
    if(first->rlink==NULL)
    {
        printf("\nemployee details deleted ssn:%d\n",first->id);
        free(first);
    }
}

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        return NULL;
    }
    temp=first;
    first=first->rlink;
    first->llink=NULL;
    printf("\nemp details ssn:%d\n",temp->id);
    free(temp);
    return first;
}

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NODE deleterear(NODE first)
{
    NODE temp,cur;
    if(first==NULL)
    {
        printf("\nempty list\n");
        return;
    }
    if(first->rlink==NULL)
    {
        printf("\nemp details ssn:%d\n",first->id);
        free(first);
        return NULL;
    }
    cur=first;
    while(cur->rlink!=NULL)
        cur=cur->rlink;
    temp=cur->llink;
    printf("\nemp details ssn:%d\n",cur->id);
    temp->rlink=NULL;
    free(cur);
    return first;
}

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void display(NODE first)
{
    NODE cur;
    int c=0;
    if(first==NULL)
    {
        printf("\nlist is empty\n");
        return;
    }
    cur=first;
    while(cur!=NULL)
    {
        printf("\n%d\n%s\n%s\n%s\n",cur->id,cur->name,cur->br,cur->asp);
        cur=cur->rlink;
        c++;
    }
    printf("\nno. of emp=%d\n",c);
}

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void main()
{
    NODE first; int ch; first=NULL;
    while(1)
    {
        printf("\n1.insert front\t 2.insert rear\t 3.delete front\n");
        printf("\n 4.delete rear\t 5.display\t 6.exit");
        printf("\nEnter choice:");
        scanf("%d",&ch);
        switch(ch)
        {

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case 1 : first=insertfront(first); break;
case 2 : first=insertrear(first); break;
case 3 : first=deletefront(first); break;
case 4 : first=deleterear(first); break;
case 5 : display(first); break;
case 6 : exit(0);
}
```

}

}