DATE - 21 Sep 2022 –

DS LAB -

PROGRAM -Doubly Linked List with Student Details

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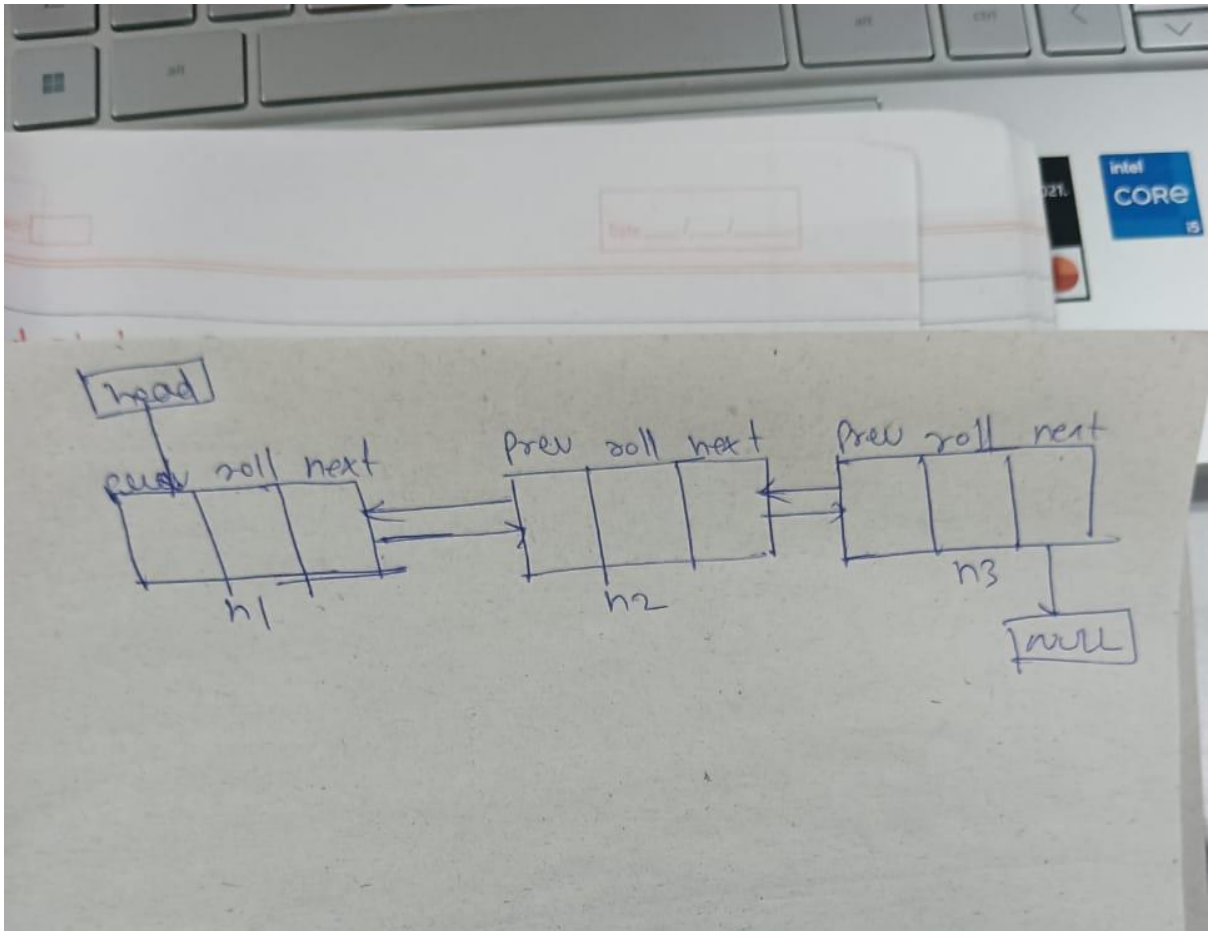
Create the node with following fields:

```
struct students{
    struct students *prev_student;
    int roll;
    struct students *next_student;
};
int main(){
    struct students n1, n2, n3;
    struct students *head, *temp;
    head = &n1;
    n1.prev_student = NULL;
    n1.roll = 3;
    n1.next_student = &n2;
    n2.roll = 9;
    n2.prev_student = &n1;
    n2.next_student = &n3
    n3.roll = 10;
    n3.prev_student = &n2;
    n3.next_student = NULL;
    temp = head;
    while (temp != NULL){
        cout << temp->roll;
        temp = temp->next;
    }
```




```
int roll;

int date;

int month;

int year;

node *next_student;.
```

// Program is :

```
#include <stdio.h>


struct students

{

    struct students *pre_student;

    int roll;
```

```
    struct students *next_student;


};
int main() {
    struct students n1,n2,n3;
    struct students *head,*temp;
    head = &n1;
    n1.pre_student = NULL;
    n1.roll = 3;
    n1.next_student = &n2;
    n2.pre_student = &n1;
    n2.roll = 9;
    n2.next_student = &n3;
    n3.pre_student = &n2;
    n3.roll = 20;
    n3.next_student = NULL;
    temp = head;
    while( temp!= NULL)
    {
        cout<<temp->roll<<endl;
        temp= temp->next_student;


    }
    return 0;
```

}

main.c

Run

Output

```c
//Aayush kumar shrivastava(2100290120003)
//polynomial using linked list
#include <stdio.h>


struct students
{
    struct students *pre_student;
    int roll;
    int date;
    int month;
    int year;
    struct students *next_student;

};
int main() {
    struct students n1,n2,n3;
    struct students *head,*temp;
    head = &n1;
    n1.pre_student = NULL;
    n1.roll = 3;
    n1.date = 27;
```

```
/tmp/Mx3PIJ9foz.o
roll:3  date:27 month:1 year:2005
roll:9  date:15 month:11    year:2002
roll:20 date:2  month:6 year:2003
```

main.c

Run

```
    n2.pre_student = &n1;
    n2.roll = 9;
    n2.date = 15;
    n2.month = 11;
    n2.year = 2002;
    n2.next_student = &n3;
    n3.pre_student = &n2;
    n3.roll = 20;
    n3.date = 2;
    n3.month = 06;
    n3.year = 2003;
    n3.next_student = NULL;
    temp = head;
    while( temp!= NULL)
    {
        printf("roll:%d\tdate:%d\tmonth:%d\tyear:%d\t\n",temp->roll,temp
            ->date,temp->month,temp->year);
        temp= temp->next_student;

    }
    return 0;
}
```

Output

```
/tmp/Mx3PIJ9foz.o
roll:3  date:27 month:1 year:2005
roll:9  date:15 month:11    year:2002
roll:20 date:2  month:6 year:2003
```