

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;
```

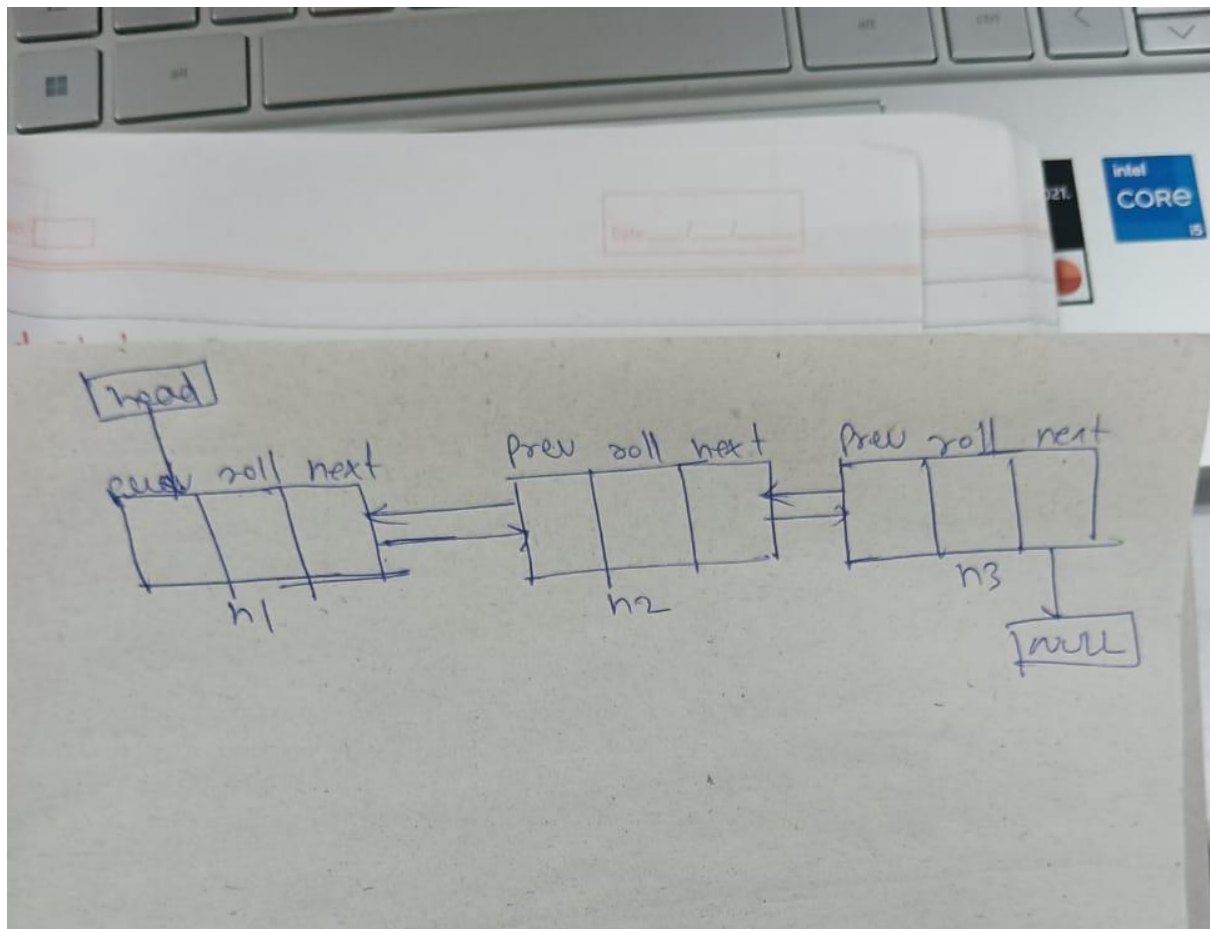
```
    temp = head;
```

```
    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		Output
<pre>1 //Aayush kumar shrivastava(2100290120003) 2 //polynomial using linked list 3 #include <stdio.h> 4 5 struct students 6 { 7 struct students *pre_student; 8 int roll; 9 int date; 10 int month; 11 int year; 12 struct students *next_student; 13 }; 14 15 int main() { 16 struct students n1,n2,n3; 17 struct students *head,*temp; 18 head = &n1; 19 n1.pre_student = NULL; 20 n1.roll = 3; 21 n1.date = 27; 22 n1.month = 1;</pre>	<pre>/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</pre>	

main.c		Run	Output
26	n2.pre_student = &n1;		/tmp/Mx3PIJ9foz.o
27	n2.roll = 9;		roll:3 date:27 month:1 year:2005
28	n2.date = 15;		roll:9 date:15 month:11 year:2002
29	n2.month = 11;		roll:20 date:2 month:6 year:2003
30	n2.year = 2002;		
31	n2.next_student = &n3;		
32	n3.pre_student = &n2;		
33	n3.roll = 20;		
34	n3.date = 2;		
35	n3.month = 06;		
36	n3.year = 2003;		
37	n3.next_student = NULL;		
38	temp = head;		
39	while(temp!= NULL)		
40	{		
41	printf("roll:%d\tdate:%d\tmonth:%d\tyear:%d\t\n", temp->roll, temp		
	->date, temp->month, temp->year);		
42	temp= temp->next_student;		
43			
44	}		
45	return 0;		
46	}		
47			