

DS Lab KCS351 - A1

22 Sep 2022 - Linked List Application - Polynomial Representation

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TOPIC :

make the expression: $4x^3 + 3x^2 + 10$

```
// ABHISHEK RAJPUT
```

```
//2100290120007
```

```
#include <iostream>
```

```
using namespace std;
```

```
    struct poly
```

```
{
```

```
    int coefficient;
```

```
    int power;
```

```
    struct poly*next;
```

```
};
```

```
int main(){
```

```
    struct poly n1,n2,n3,*head,*temp,*tail;
```

```
head=&n1;  
n1.coefficient=4;  
n1.power=3;  
n1.next=&n2;
```

```
n2.coefficient=3;  
n2.power=2;  
n2.next=&n3;
```

```
n3.coefficient=10;  
n3.power=0;  
n3.next=NULL;
```

```
temp=head;  
tail = &n3;
```

```
while(temp != NULL){  
    cout<<temp->coefficient<<"x**"<<temp->  
power;  
    if(temp!=tail){  
        cout<<"+"  
    }  
}
```

```
temp=temp->next;
}
```

```
return 0;
}
```

```
1  #include <iostream>
2  using namespace std;
3      struct poly
4  {
5      int coefficient;
6      int power;
7      struct poly*next;
8
9  };
10 int main(){
11     struct poly n1,n2,n3,*head,*temp,*tail;
12     head=&n1;
13     n1.coefficient=4;
14     n1.power=3;
15     n1.next=&n2;
16
17     n2.coefficient=3;
18     n2.power=2;
19     n2.next=&n3;
20
21     n3.coefficient=10;
22     n3.power=0;
23     n3.next=NULL;
24
25     temp=head;
26     tail = &n3;
27
28     while(temp != NULL){
29         cout<<temp->coefficient<<"x**"<<temp->power;
30         if(temp!=tail){
31             cout<<"+";
32         }
33         temp=temp->next;
34     }
35
36     return 0;
37 }
```

OUTPUT

```
4x**3+3x**2+10x**0
```

```
...Program finished with exit code 0
Press ENTER to exit console.
```