

PRIYANSHI

2016927

E

Q1.

```
#include<bits/stdc++.h>
```

```
using namespace std;
```

```
long matChainOrder(int *p,int n)
```

```
{
```

```
    int m[n][n];
```

```
    int i,j,k,l,q;
```

```
    for(i=1;i<n;i++)
```

```
        m[i][i]=0;
```

```
    for(l=2;l<n;l++)
```

```
    {
```

```
        for(i=1;i<n-l+1;i++)
```

```
        {
```

```
            j=i+l-1;
```

```
            m[i][j]=INT_MAX;
```

```
            for(k=i;k<=j-1;k++)
```

```
            {
```

```

        q=m[i][k]+m[k+1][j]+p[i-1]*p[k]*p[j];
        if(q<m[i][j])
            m[i][j]=q;
    }
}
}
return m[1][n-1];
}

```

```

int main()
{
    int n;
    cin>>n;

    int p[n+1];
    for(int i=0;i<n;i++)
    {
        cin>>p[i]>>p[i+1];
    }

    cout<<matChainOrder(p,n+1);
    return 0;
}

```

**OUTPUT**

```
main.cpp
1  /*****
2  PRIYANSHI
3  2016927
4  E
5  *****/
input
3
10 30
30 5
5 60
4500

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

**Q2.**

```
#include<bits/stdc++.h>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n,amt;
```

```
    cin>>n;
```

```
    int i,j,a[n];
```

```
    for(i=0;i<n;i++)
```

```
        cin>>a[i];
```

```
    cin>>amt;
```

```
    int ans[amt+1];
```

```
    for(i=1;i<=amt;i++)
```

```
        ans[i]=0;
```

```
    ans[0]=1;
```

```

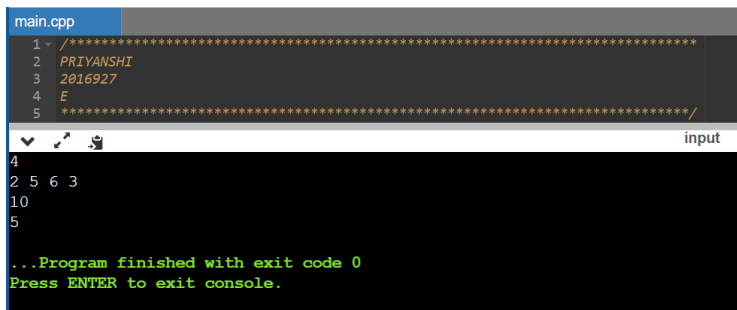
for(j=0;j<n;j++)
{
    for(i=1;i<=amt;i++)
    {
        if(a[j]<=i)
            ans[i]+=(ans[i-a[j]]);
    }
}

cout<<ans[amt];

return 0;
}

```

## OUTPUT



The screenshot shows a code editor with a file named 'main.cpp' containing a C++ program. The program takes an array 'a' and a value 'amt' as input and calculates the sum of subarrays of length 'amt'. The input provided is '2 5 6 3' for the array and '10' for 'amt'. The output is '5'. The program finishes with exit code 0.

```

main.cpp
1-  /*****
2-  PRIYANSHI
3-  2016927
4-  E
5-  *****/
input
4
2 5 6 3
10
5
...Program finished with exit code 0
Press ENTER to exit console.

```

## Q3.

```

#include<bits/stdc++.h>

using namespace std;

```

```

int main()
{
    int n;

    cin>>n;

```

```
int i,j,a[n];  
for(i=0;i<n;i++)  
cin>>a[i];
```

```
int sum=0;  
for(i=0;i<n;i++)  
sum+=a[i];  
if(sum%2!=0)  
{  
    cout<<"no";  
    return 0;  
}
```

```
sum=sum/2;  
bool s[n+1][sum+1];
```

```
for(i=0;i<=n;i++)  
{  
    for(j=0;j<=sum;j++)  
    {  
        if(j==0)  
            s[i][j]=1;  
        else if(i==0)  
            s[i][j]=0;
```

```

else
{
    if(a[i-1]>j)
        s[i][j]=s[i-1][j];
    else
        s[i][j]=(s[i-1][j] || s[i-1][j-a[i-1]]);
}
}
}

```

```

if(s[n][sum])
    cout<<"yes";
else
    cout<<"no";

return 0;
}

```

## OUTPUT

```

main.cpp
1  /******
2  PRIYANSHI
3  2016927
4  E
5  *****/
input
7
1 5 4 11 5 14 10
yes
...Program finished with exit code 0
Press ENTER to exit console.

```