

Question 1

```
#include<iostream>
#include<vector>
using namespace std;

int main()
{
    int m;
    cout<<"enter the capacity (m) : ";
    cin>>m;
    int n;
    cout<<"enter the number of petrol pump : ";
    cin>>n;
    int arr[n];
    cout<<"enter the distance of pump ";
    for(int i=0;i<n;i++)
    {
        cin>>arr[i];
    }
    int cur_dist = 0;

    vector<int> ans;
    int i;
    for( i=0;i<n;i++)
    {

        while(i<n && arr[i]-cur_dist<=m)
        {
            i++;
        }

        i--;
        ans.push_back(arr[i]);
        if(i<n)cur_dist=ans[i];
        if(i>=n-2) break;

    }
    cout<<endl;
    for(int i=0;i<ans.size();i++)
    {
        cout<<" "<<ans[i];
    }
}
```

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}
```

Question 2

```
#include <iostream>
using namespace std;
int findMin(string slots[], int n, int m)
{
    int counts[m] = { 0 };
    for (int i = 0; i < n; i++)
        for (int j = 0; j < m; j++)
            if (slots[i][j] == '1')
                counts[j]++;
    return *max_element(counts, counts+m);
}

int main()
{
    int n = 3, m = 7;
    cout<<"enter the value of n : ";
    cin>>n;
    cout<<"enter the value of m : ";
    cin>>m;
    string slots[n];
    for(int i=0;i<n;i++)
    {
        getline(cin,slots[i]);
    }
    cout << findMin(slots, n, m);
    return 0;
}
```

Question 3

```
#include<iostream>
#include<vector>
using namespace std;

int main()
{
    int m;
    cout<<"enter the capacity (m) : ";
    cin>>m;
    int n;
```

```

cout<<"enter the number of petrol pump : ";
cin>>n;
int arr[n];
cout<<"enter the distance of pump ";
for(int i=0;i<n;i++)
{
    cin>>arr[i];
}
int cur_dist = 0;

vector<int> ans;
int i;
for( i=0;i<n;i++)
{

    while(i<n && arr[i]-cur_dist<=m)
    {
        i++;
    }

    i--;
    ans.push_back(arr[i]);
    if(i<n)cur_dist=ans[i];
    if(i>=n-2) break;

}
cout<<endl;
for(int i=0;i<ans.size();i++)
{
    cout<<" "<<ans[i];
}
}

```

Question 4

```

#include <iostream>
#include <vector>
using namespace std;

int main()

```

```

{
    int m;
    cout << "enter the capacity (m) : ";
    cin >> m;
    int n;
    cout << "enter the number of petrol pump : ";
    cin >> n;
    int arr[n];
    cout << "enter the distance of pump ";
    for (int i = 0; i < n; i++)
    {
        cin >> arr[i];
    }
    int cur_dist = 0;

    vector<int> ans;
    int i;
    for (i = 0; i < n; i++)
    {

        while (i < n && arr[i] - cur_dist <= m)
        {
            i++;

            i--;
            ans.push_back(arr[i]);
            if (i < n)
                cur_dist = ans[i];
            if (i >= n - 2)
                break;
        }
        cout << endl;
        for (int i = 0; i < ans.size(); i++)
        {
            cout << " " << ans[i];
        }
    }
}

```