```
/*
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Batch   :       A
Experiment no.: 08
Title   :       C++ program to use map associative container
*/
```

Program:

```cpp
#include<iostream>
#include<iterator>
#include<map>
using namespace std;
void insert(int count);
void display();
void  search();
void  update();
void remove();
map<string,float>pairs;
void insert(int count)
{
        string state;
        float population;
        cout<<"Enter no. of pairs you want to insert: ";
        cin>>count;
        int i;
        for(i=0;i<count;i++)
        {
                cout<<"Enter name of the state ("<<i+1<<")      :";
```

```cpp
                cin>>state;

                cout<<"Enter the population in crores("<<i+1<<"): ";

                cin>>population;

                pairs.insert(pair<string,float>(state,population));

        }

}

void display()

{

                map<string,float>::iterator itr;

                cout<<endl;

                cout<<"\t"<<"State"<<"\t"<<"Population";

                cout<<endl;

                for(itr=pairs.begin();itr!=pairs.end();++itr)

                {

                        cout<<"\t"<<itr->first<<" \t "<<itr->second<<'\n';

                        cout<<endl;

                }

}

void search()

{


        map<string,float>::iterator itr;

        string state;

        cout<<"\n Enter the State Name to search in Map Container: ";

        cin>>state;

        int flag=1;

        if(pairs.find(state)!=pairs.end())

        {

                cout<<"\n State "<<state<<"found and its population is: "<<pairs[state]<<"Crores";

        }

        else
```

```cpp
		{
			cout<<"\n State "<<state<<" is not found.Please enter correct spelling of state";


		}
}
void update()
{
	map<string,float>::iterator ptr;
	string state;
	int flag=1;
	cout<<"Enter the state of which population you want to update: ";
	cin>>state;
	for(ptr=pairs.begin();ptr!=pairs.end();ptr++)
	{
		if(ptr->first==state)
		{
			cout<<"\n State Details Found "<<endl;
			cout<<"\n Enter the updated population count in crores: ";
			cin>>ptr->second;
			flag= 0;
			break;
		}

	}
	if(flag!=0)
		cout<<"Not Found";
}
void remove()
{
	string state;
```

```cpp
        int flag=1;
        map<string,float>::iterator ptr;
        cout<<"Enter the state you want to remove: ";
        cin>>state;
        for(ptr=pairs.begin();ptr!=pairs.end();ptr++)
        {
                if(ptr->first==state)
                {
                        cout<<"\n State found and it is deleted along with value from
container";
                        pairs.erase(state);
                        flag=0;
                        break;
                }
        }

        if(flag!=0)
        cout<<"\n State not found"<<endl;
}
int main()
{
        int count;
        int choice;
        char ans;
    do
        {
                cout<<"1.ADD ENTRY IN MAP     : "<<endl;
                cout<<"2.DISPLAY MAP CONTAINER: "<<endl;
                cout<<"3.FIND IN MAP CONTAINER: "<<endl;
                cout<<"4.UPDATE MAP CONTAINER : "<<endl;
                cout<<"5.ERASE VALUES IN MAP CONTAINER: "<<endl;
                cout<<"Enter Your Choice: "<<endl;
```

```cpp
cin>>choice;
switch(choice)
{
        case 1:insert(count);
            break;
        case 2:display();
            break;
        case 3:search();
            break;
        case 4:update();
            break;
        case 5:remove();
            break;
        case 6:default:cout<<"\n You have entered wrong choice X=X";

    }
    cout<<"\n Do you want to continue ";
    cin>>ans;
}
while(ans=='Y'||ans=='y');
return 0;

}
```

```
/*
```

OUTPUT:

1. ADD ENTRY IN MAP   :

2. DISPLAY MAP CONTAINER:

3. FIND IN MAP CONTAINER:

4. UPDATE MAP CONTAINER :

5. ERASE VALUES IN MAP CONTAINER:

Enter Your Choice:

1

Enter no. of pairs you want to insert: 5

Enter name of the state (1)   :Maharashtra

Enter the population in crores(1): 10

Enter name of the state (2)   :Gujarat

Enter the population in crores(2): 5

Enter name of the state (3)   :Punjab

Enter the population in crores(3): 7

Enter name of the state (4)   :Rajasthan

Enter the population in crores(4): 3

Enter name of the state (5)   :Karnataka

Enter the population in crores(5): 4

 Do you want to continue y

1. ADD ENTRY IN MAP   :

2. DISPLAY MAP CONTAINER:

3. FIND IN MAP CONTAINER:

4. UPDATE MAP CONTAINER :

5. ERASE VALUES IN MAP CONTAINER:

Enter Your Choice:

2

```
State   Population

Gujarat        5


Karnataka      4


Maharashtra    10


Punjab  7


Rajasthan      3
```

Do you want to continue y

1. ADD ENTRY IN MAP   :

2. DISPLAY MAP CONTAINER:

3. FIND IN MAP CONTAINER:

4. UPDATE MAP CONTAINER :

5. ERASE VALUES IN MAP CONTAINER:

Enter Your Choice:

3

Enter the State Name to search in Map Container: Punjab

State Punjabfound and its population is: 7Crores

Do you want to continue y

1. ADD ENTRY IN MAP   :

2. DISPLAY MAP CONTAINER:

3. FIND IN MAP CONTAINER:

4. UPDATE MAP CONTAINER :

5. ERASE VALUES IN MAP CONTAINER:

Enter Your Choice:

4

Enter the state of which population you want to update: Goa

Not Found

 Do you want to continue y

1.ADD ENTRY IN MAP   :

2. DISPLAY MAP CONTAINER:

3. FIND IN MAP CONTAINER:

4. UPDATE MAP CONTAINER :

5. ERASE VALUES IN MAP CONTAINER:

Enter Your Choice:

5

Enter the state you want to remove: Punjab

 State found and it is deleted along with value from container

 Do you want to continue

*/