Application Name:

WhatsApp

Use case(s):

1. Ability to run polls in group chats

Scenario(s):

1. It could allow you to decide a picnic spot or quickly decide on a lunch venue with friends or relatives

Bare Minimum Inputs:

- 1. Open a group chat
- 2. Click on the Poll button/icon
- 3. Create the options for the poll and click on "Send Poll"
- **4.** Now every group member can view the results after they are done with selecting their option.

Output:

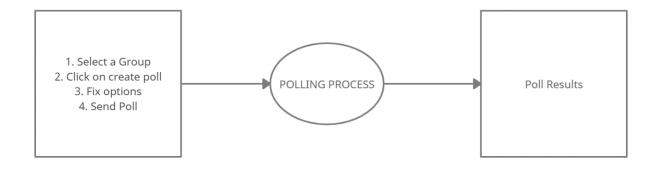
Poll results can be helpful in making important decisions considering every person's opinion in the group (such as crucial business decisions)

TASK-2:

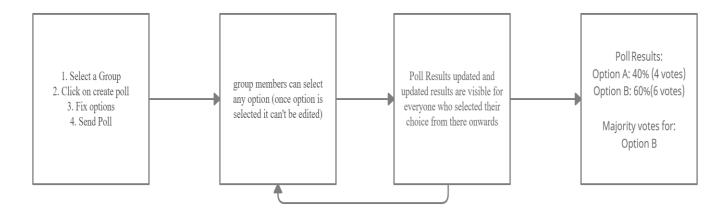
Using Abstraction – Hiding the complexity of the system through Levels of Abstraction.

(We need to know how to use a system without bothering about underlying principles.

LEVEL-1



LEVEL-2 (More detailed flow looks as follows)



CODE:

```
#include <iostream>
#include <string>
#include <cstring>
#include <map>
#include <vector>
using namespace std;
class Poll{
    public:
    int optionSize;
    int totalVotesSoFar=0;
    map<string,int> mp;
    void createPoll(int n,vector<string> options){
        this->optionSize=n;
        for(int i=0;i<optionSize;i++){</pre>
            mp[options[i]]=0;
        }
    }
    void submitPoll(int i, vector<string> options){
        mp[options[i]]++;
        totalVotesSoFar++;
```

```
void viewResults(){
        cout<<endl;</pre>
        cout<<"Poll Results:"<<endl;</pre>
         for(auto m:mp){
             cout<<m.first<<" "<<m.second*100/totalVotesSoFar<<"% ("<<m</pre>
.second<<" votes)"<<endl;</pre>
         }
    }
};
int main() {
    Poll newPoll;
    cout<<"Enter optionsize and options"<<endl;</pre>
    int n;
    cin>>n;
    string s;
    vector<string> v;
    for(int i=0;i<n;i++){</pre>
         cin>>s;
        v.push_back(s);
    newPoll.createPoll(n,v);
    int numberOfGroupMembers;
    cin>>numberOfGroupMembers;
    cout<<"Select option selected by everyone";</pre>
    int x;
    for(int i=0;i<numberOfGroupMembers;i++){</pre>
         cin>>x;
         newPoll.submitPoll(x,v);
    newPoll.viewResults();
    return 0;
```

INPUT:

4

NewDelhi Hyd Kolkata Bangalore

8

11132303

OUTPUT:

Enter optionsize and options Select option selected by everyone

Poll Results: Bangalore 37% (3 votes) Hyd 37% (3 votes) Kolkata 12% (1 votes) NewDelhi 12% (1 votes)