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Enrollment NO. – 2020CSB039
Branch – Computer Science and Technology
Group - GX
Subject – DBMS Laboratory

ASSIGNMENT – 1

Code –

```
#include <bits/stdc++.h>
#include <fstream>
using namespace std;

string product_code(string res) {
  int count = 0;
  string temp;
  for (int i = 0; i < res.length(); i++) {
    if (res[i] == ' ') {
      count++;
    }
    if (count == 2) {
      temp.push_back(res[i]);
    }
  }
  return temp;
}
vector<vector<string>> helper(vector<string> res,
                              unordered_map<string, int> &m) {
  unordered_set<string> unique_product;
  vector<vector<string>> ans;
  for (int i = 0; i < res.size(); i++) {
    if (unique_product.find(product_code(res[i])) !=
unique_product.end())
```

```
      continue;
    else {
      vector<string> pCode;
      int k;
      cout << "Enter Price of " << product_code(res[i]) << " : ";
      cin >> k;
      pCode.push_back(res[i]);
      pCode.push_back(to_string(k));
      m[product_code(res[i])] = k;
      ans.push_back(pCode);
      unique_product.insert(product_code(res[i]));
    }
  }
  return ans;
}

vector<string> regionExtraction(vector<string> myStr, int reg) {
  vector<string> vec;
  for (int i = 0; i < myStr.size(); i++) {
    if (myStr[i][0] - '0' == reg)
      vec.push_back(myStr[i]);
  }
  return vec;
}

unordered_map<int, vector<string>>
salesmanExtraction(vector<string> myStr) {
  unordered_map<int, vector<string>> m;
  for (int i = 0; i < myStr.size(); i++) {
    m[myStr[i][2] - '0'].push_back(myStr[i]);
  }
  return m;
}

int getNumber(string str) {
```

```
  int count = 0;
  string res;
  for (int i = 0; i < str.length(); i++) {
    if (str[i] == ' ')
      count++;
    if (count == 3) {
      res.push_back(str[i]);
    }
  }
  return stoi(res);
}
int calculateTotal(vector<string> myStr, unordered_map<string, int>
m) {
  int total = 0;
  for (int i = 0; i < myStr.size(); i++) {
    total += m[product_code(myStr[i])] * getNumber(myStr[i]);
  }
  return total;
}

int main() {
  ifstream file;
  file.open("salesInput.txt");
  string resStr;
  vector<string> myStr;
  while (getline(file, resStr)) {
    myStr.push_back(resStr);
  }
  unordered_map<string, int> price;

  vector<vector<string>> ans = helper(myStr, price);

  file.close();
  ofstream final_file;
  final_file.open("PriceList.txt");
```

```
  for (int i = 0; i < ans.size(); i++) {
    string f = ans[i][0];
    string l = ans[i][1];
    final_file << f << "|" << l << endl;
  }
  ofstream f_file;
  f_file.open("FinalReport.txt");
  f_file << "\t\t\t Indranil Bain\t\t" << endl;
  f_file << "\t\t\t2020CSB039" << endl;

  f_file << "\t\tReport for Salesman for Each Region" << endl;
  for (int i = 1; i <= 4; i++) {
    f_file << "\n\t\t\tRegion : " << i << endl << endl;
    vector<string> vec = regionExtraction(myStr, i);
    for (int j = 1; j < 7; j++) {
      unordered_map<int, vector<string>> salesMan =
salesmanExtraction(vec);
      f_file << "Sales Man " << j << " : " << calculateTotal(salesMan[j],
price)
           << endl;
    }
    f_file << "Total Sale in Region " << i
         << " is: " << calculateTotal(vec, price) << endl;
  }
  f_file.close();
  final_file.close();
  return 0;
}
```

Input Files –

1 2 Tab 6
2 4 Book 8
1 6 Pencil 1
2 3 Pen 45
1 3 Box 10
3 6 Pen 4
4 5 Book 10
3 2 Pen 67
4 6 Mobile 2
3 2 Tab 10
2 2 Box 25

Generated Files –

Containing Price:

1 2 Tab 6|5000
2 4 Book 8|200
1 6 Pencil 1|2
2 3 Pen 45|5
1 3 Box 10|10
4 6 Mobile 2|10000

Final Report -

Indranil Bain
2020CSB039

Report for Salesman for Each Region

Region : 1

Sales Man 1 : 0
Sales Man 2 : 30000
Sales Man 3 : 100
Sales Man 4 : 0
Sales Man 5 : 0
Sales Man 6 : 2
Total Sale in Region 1 is: 30102

Region : 2

Sales Man 1 : 0
Sales Man 2 : 250
Sales Man 3 : 225
Sales Man 4 : 1600
Sales Man 5 : 0
Sales Man 6 : 0
Total Sale in Region 2 is: 2075

Region : 3

Sales Man 1 : 0
Sales Man 2 : 50335
Sales Man 3 : 0
Sales Man 4 : 0
Sales Man 5 : 0
Sales Man 6 : 20
Total Sale in Region 3 is: 50355

Region : 4

Sales Man 1 : 0
Sales Man 2 : 0
Sales Man 3 : 0
Sales Man 4 : 0
Sales Man 5 : 2000
Sales Man 6 : 20000
Total Sale in Region 4 is: 22000