**PROGRAM FOR FRUIT & VEGETABLE MALL:**

#include <iostream>

#include<stdlib.h>

using namespace std;

class node

{

public:

int freq;

float price;

string name;

node \*next;

node \*prev;

};

class market

{

private:

node \*head,\*head1;

public:

market()

{

head=NULL;

head1=NULL;

}

void create\_veg();

void create\_fruit();

void read();

void display();

void sort();

};

void market::create\_veg()

{

//--------------Vegetable---------------

node \*temp,\*trav;

temp=new node;

temp->next=NULL;

temp->prev=NULL;

cout<<"\nEnter vegetable Name"<<endl;

cin>>temp->name;

cout<<"\nEnter its Price "<<endl;

cin>>temp->price;

cout<<"\nEnter the its Frequency"<<endl;

cin>>temp->freq;

if(head==NULL)

{

head=temp;

}

else if(head->next==NULL)

{

head->next=temp;

temp->prev=head;

}

else

{

trav=head;

while(trav->next!=NULL)

{

trav=trav->next;

}

trav->next=temp;

temp->prev=trav;

}

}

void market :: create\_fruit()

{

//-----------Fruit-------------

node \*temp1,\*trav1;

temp1=new node;

temp1->next=NULL;

temp1->prev=NULL;

cout<<"\nEnter Fruit Name"<<endl;

cin>>temp1->name;

cout<<"\nEnter its Price "<<endl;

cin>>temp1->price;

cout<<"\nEnter the its Frequency"<<endl;

cin>>temp1->freq;

if(head1==NULL)

{

head1=temp1;

}

else if(head1->next==NULL)

{

head1->next=temp1;

temp1->prev=head1;

}

else

{

trav1=head1;

while(trav1->next!=NULL)

{

trav1=trav1->next;

}

trav1->next=temp1;

temp1->prev=trav1;

}

}

void market::display()

{

if(head==NULL && head1==NULL)

{

cout<<"\nList is Empty"<<endl;

}

else

{

cout<<"\nVegetable List is:"<<endl;

node \*trav;

trav=head;

cout<<"\nName"<<"\tPrice"<<"\tFrequency\n";

while(trav!=NULL)

{

cout<<trav->name<<"\t"<<trav->price<<"\t"<<trav->freq<<endl;

trav=trav->next;

}

cout<<"\nFruit List is:";

node \*trav1;

trav1=head1;

cout<<"\nName"<<"\tPrice"<<"\tFrequency\n";

while(trav1!=NULL)

{

cout<<trav1->name<<"\t"<<trav1->price<<"\t"<<trav1->freq<<endl;

trav1=trav1->next;

}

}

}

void market::sort()

{

node \*trav1,\*trav2;

for(trav1=head;trav1!=NULL;trav1=trav1->next)

{

for(trav2=trav1->next;trav2!=NULL;trav2=trav2->next)

{

if(trav1->freq > trav2->freq)

{

node \*temp;

temp=new node;

temp->price=trav1->price;

temp->name=trav1->name;

trav1->price=trav2->price;

trav2->price=temp->price;

trav1->name=trav2->name;

trav2->name=temp->name;

temp->freq=trav1->freq;

trav1->freq=trav2->freq;

trav2->freq=temp->freq;

}

}

}

//-------------------------

for(trav1=head1;trav1!=NULL;trav1=trav1->next)

{

for(trav2=trav1->next;trav2!=NULL;trav2=trav2->next)

{

if(trav1->freq > trav2->freq)

{

node \*temp;

temp=new node;

temp->price=trav1->price;

temp->name=trav1->name;

trav1->price=trav2->price;

trav2->price=temp->price;

trav1->name=trav2->name;

trav2->name=temp->name;

temp->freq=trav1->freq;

trav1->freq=trav2->freq;

trav2->freq=temp->freq;

}

}

}

}

void market :: read()

{

int v,f;

cout<<"\nEnter the No. of Vegetables:";

cin>>v;

for(int i=0;i<v;i++)

{

create\_veg();

}

cout<<"\nEnter the No. of Fruits:";

cin>>f;

for(int j=0;j<f;j++)

{

create\_fruit();

}

}

int main()

{

market m1;

int ch;

while(1)

{

cout<<"-------------------------------";

cout<<"\n\*\*\*\*Menu\*\*\*\*\n1.Create\t2.Display\n3.Sort\t\t4.Exit";

cout<<"\n------------------------------";

cout<<"\nEnter your choice";

cin>>ch;

switch(ch)

{

case 1:m1.read();

break;

case 2:m1.display();

break;

case 3:m1.sort();

break;

case 4:exit(0);

break;

default:

cout<<"\nInvalid choice";

break;

}

}

return 0;

}

**OUTPUT:**

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\*\*\*\*Menu\*\*\*\*

1.Create 2.Display

3.Sort 4.Exit

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Enter your choice1

Enter the No. of Vegetables:3

Enter vegetable Name

Brinjal

Enter its Price

40

Enter the its Frequency

7

Enter vegetable Name

Spinach

Enter its Price

30

Enter the its Frequency

4

Enter vegetable Name

Potato

Enter its Price

25

Enter the its Frequency

5

Enter the No. of Fruits:2

Enter Fruit Name

Apple

Enter its Price

60

Enter the its Frequency

6

Enter Fruit Name

Banana

Enter its Price

22

Enter the its Frequency

9

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\*\*\*\*Menu\*\*\*\*

1.Create 2.Display

3.Sort 4.Exit

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Enter your choice2

Vegetable List is:

Name Price Frequency

Brinjal 40 7

Spinach 30 4

Potato 25 5

Fruit List is:

Name Price Frequency

Apple 60 6

Banana 22 9

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\*\*\*\*Menu\*\*\*\*

1.Create 2.Display

3.Sort 4.Exit

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Enter your choice3

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\*\*\*\*Menu\*\*\*\*

1.Create 2.Display

3.Sort 4.Exit

------------------------------

Enter your choice2

Vegetable List is:

Name Price Frequency

Spinach 30 4

Potato 25 5

Brinjal 40 7

Fruit List is:

Name Price Frequency

Apple 60 6

Banana 22 9

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\*\*\*\*Menu\*\*\*\*

1.Create 2.Display

3.Sort 4.Exit

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Enter your choice4