**#include<iostream>**

**#include<vector>**

**using namespace std;**

**class MenuItem**

**{**

**string itemName;**

**double itemPrice;**

**public:**

**MenuItem(string,double);**

**void setName(string);**

**void setPrice(double);**

**string getName() const;**

**double getPrice() const;**

**virtual void displayItemInfo() const;**

**};**

**class Appetizer : public MenuItem**

**{**

**vector<string> ingred;**

**float por\_size;**

**public:**

**Appetizer(string,double,string,float);**

**void setIngred(string);**

**void setSize(float);**

**vector<string> getIngred() const;**

**float getSize() const;**

**void displayItemInfo() const;**

**};**

**class MainCourse : public MenuItem**

**{**

**vector<string> ingred;**

**float por\_size;**

**public:**

**MainCourse(string,double,string,float);**

**void setIngred(string);**

**void setSize(float);**

**vector<string> getIngred() const;**

**float getSize() const;**

**void displayItemInfo() const;**

**};**

**MenuItem::MenuItem(string name="",double price=0)**

**{**

**itemName = name;**

**if(price>=0)**

**itemPrice=price;**

**}**

**void MenuItem::setName(string name)**

**{**

**itemName= name;**

**}**

**void MenuItem::setPrice(double price)**

**{**

**if(price>=0)**

**itemPrice= price;**

**}**

**string MenuItem::getName() const**

**{**

**return itemName;**

**}**

**double MenuItem::getPrice() const**

**{**

**return itemPrice;**

**}**

**void MenuItem::displayItemInfo() const**

**{**

**cout<<endl<<"\tName:- "<<itemName<<endl<<"\tPrice:- "<<itemPrice<<endl;**

**}**

**Appetizer::Appetizer(string name="",double price=0,string ingre="",float size=0):MenuItem(name,price)**

**{**

**if(ingre!="")**

**ingred.push\_back(ingre);**

**if(size>=0)**

**por\_size=size;**

**}**

**void Appetizer::setIngred(string ingre)**

**{**

**ingred.push\_back(ingre);**

**}**

**void Appetizer::setSize(float size)**

**{**

**por\_size=size;**

**}**

**vector<string> Appetizer::getIngred() const**

**{**

**return ingred;**

**}**

**float Appetizer::getSize() const**

**{**

**return por\_size;**

**}**

**void Appetizer::displayItemInfo() const**

**{**

**cout<<endl<<"\tName:- "<<getName()<<endl<<"\tPrice:- "<<getPrice()<<endl<<"\tIngredients:- ";**

**for(auto ele:ingred)**

**{**

**cout<<ele<<", ";**

**}**

**cout<<endl<<"\tPortion Size:- "<<por\_size<<endl;**

**}**

**MainCourse::MainCourse(string name="",double price=0,string ingre="",float size=0):MenuItem(name,price)**

**{**

**if(ingre!="")**

**ingred.push\_back(ingre);**

**if(size>=0)**

**por\_size=size;**

**}**

**void MainCourse::setIngred(string ingre)**

**{**

**ingred.push\_back(ingre);**

**}**

**void MainCourse::setSize(float size)**

**{**

**por\_size=size;**

**}**

**vector<string> MainCourse::getIngred() const**

**{**

**return ingred;**

**}**

**float MainCourse::getSize() const**

**{**

**return por\_size;**

**}**

**void MainCourse::displayItemInfo() const**

**{**

**cout<<endl<<"\tName:- "<<getName()<<endl<<"\tPrice:- "<<getPrice()<<endl<<"\tIngredients:- ";**

**for(auto ele:ingred)**

**{**

**cout<<ele<<", ";**

**}**

**cout<<endl<<"\tPortion Size:- "<<por\_size<<endl;**

**}**

**int main()**

**{**

**Appetizer \*ap1 = new Appetizer("Savory Party Bread",299,"",12);**

**ap1->setIngred("gaskjhd");**

**ap1->setIngred("yijhd");**

**Appetizer \*ap2 = new Appetizer("Artichoke Spinach Dip",399,"",12);**

**ap2->setIngred("sdfvc");**

**ap2->setIngred("tyhgbn");**

**Appetizer \*ap3 = new Appetizer("Cheesy Pull-Apart Bread",199,"", 4);**

**ap3->setIngred("dfa");**

**ap3->setIngred("arert");**

**Appetizer \*ap4 = new Appetizer("Teriyaki Pineapple Meatballs",254,"",9);**

**ap4->setIngred("wr");**

**ap4->setIngred("ytugh");**

**Appetizer \*ap5 = new Appetizer("Fruit Charcuterie Board",45,"",1);**

**ap5->setIngred("tre");**

**ap5->setIngred("asf");**

**MainCourse \*mc1 = new MainCourse("Orange-Glazed Meatballs",299,"",3);**

**mc1->setIngred("mnbc");**

**mc1->setIngred("yijhd");**

**MainCourse \*mc2 = new MainCourse("curries",120,"",1);**

**mc2->setIngred("ety");**

**mc2->setIngred("yt");**

**MainCourse \*mc3 = new MainCourse("dry vegetables",150,"",12);**

**mc3->setIngred("wer");**

**mc3->setIngred("sdf");**

**MainCourse \*mc4 = new MainCourse("dal",50,"", 3);**

**mc4->setIngred("xv");**

**mc4->setIngred("dfg");**

**MainCourse \*mc5 = new MainCourse("rice",99,"",2);**

**mc5->setIngred("wre");**

**mc5->setIngred("ewq");**

**int ch;**

**while(ch!=3)**

**{**

**cout<<endl<<"\_\_Menu\_\_"<<endl<<"\t1. Appetizer"<<endl<<"\t2. Main Course"<<endl<<"\t3. exit"<<endl<<"choose option:- ";**

**cin>>ch;**

**switch(ch)**

**{**

**case 1:**

**cout<<"1"<<endl;**

**ap1->displayItemInfo();**

**cout<<"2"<<endl;**

**ap2->displayItemInfo();**

**cout<<"3"<<endl;**

**ap3->displayItemInfo();**

**cout<<"4"<<endl;**

**ap4->displayItemInfo();**

**cout<<"5"<<endl;**

**ap5->displayItemInfo();**

**break;**

**case 2:**

**cout<<"1"<<endl;**

**mc1->displayItemInfo();**

**cout<<"2"<<endl;**

**mc2->displayItemInfo();**

**cout<<"3"<<endl;**

**mc3->displayItemInfo();**

**cout<<"4"<<endl;**

**mc4->displayItemInfo();**

**cout<<"5"<<endl;**

**mc5->displayItemInfo();**

**break;**

**case 3:**

**cout<<"Exting..."<<endl;**

**break;**

**default:**

**cout<<"Wrong Input !please try again"<<endl;**

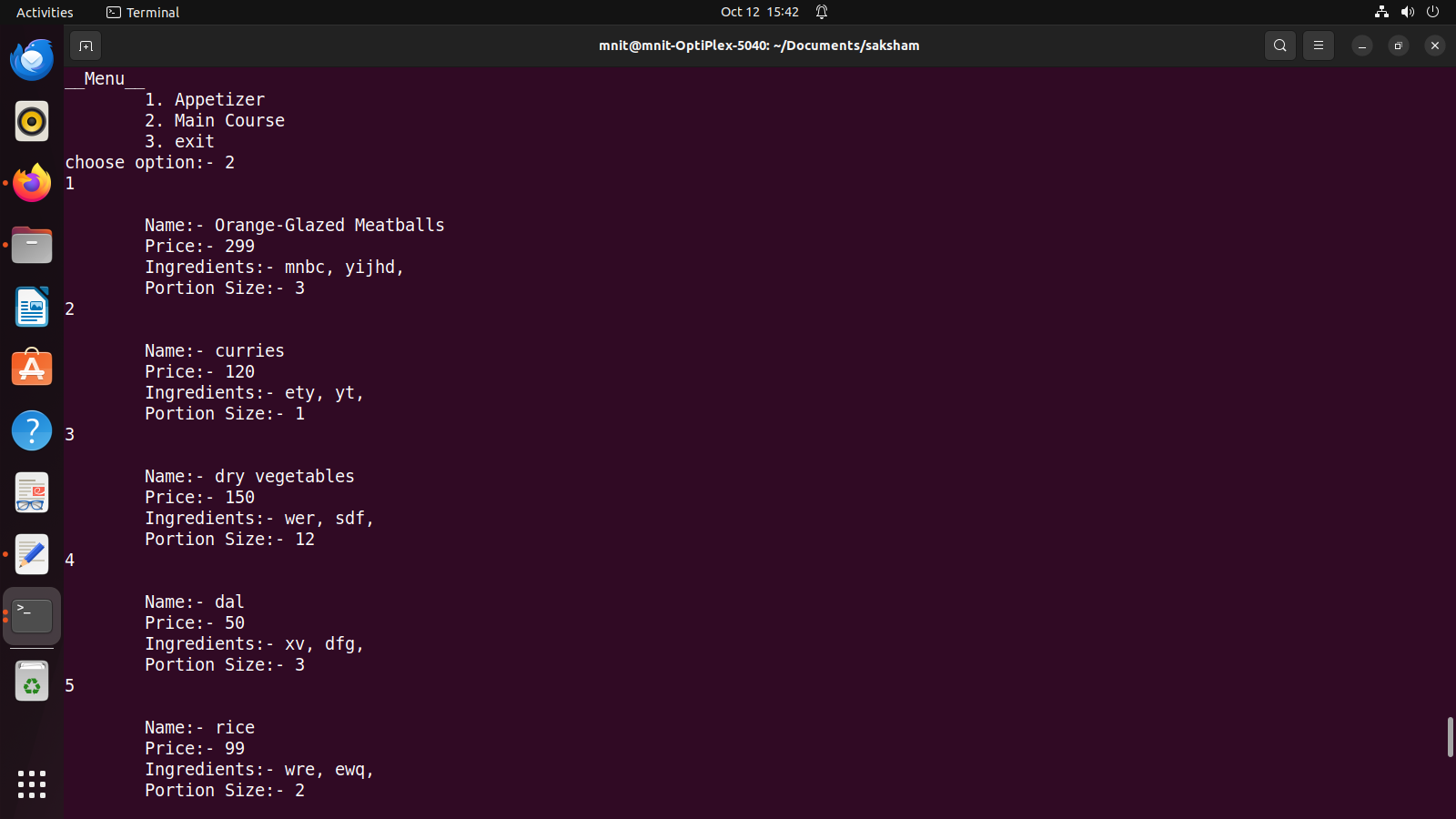
**}**

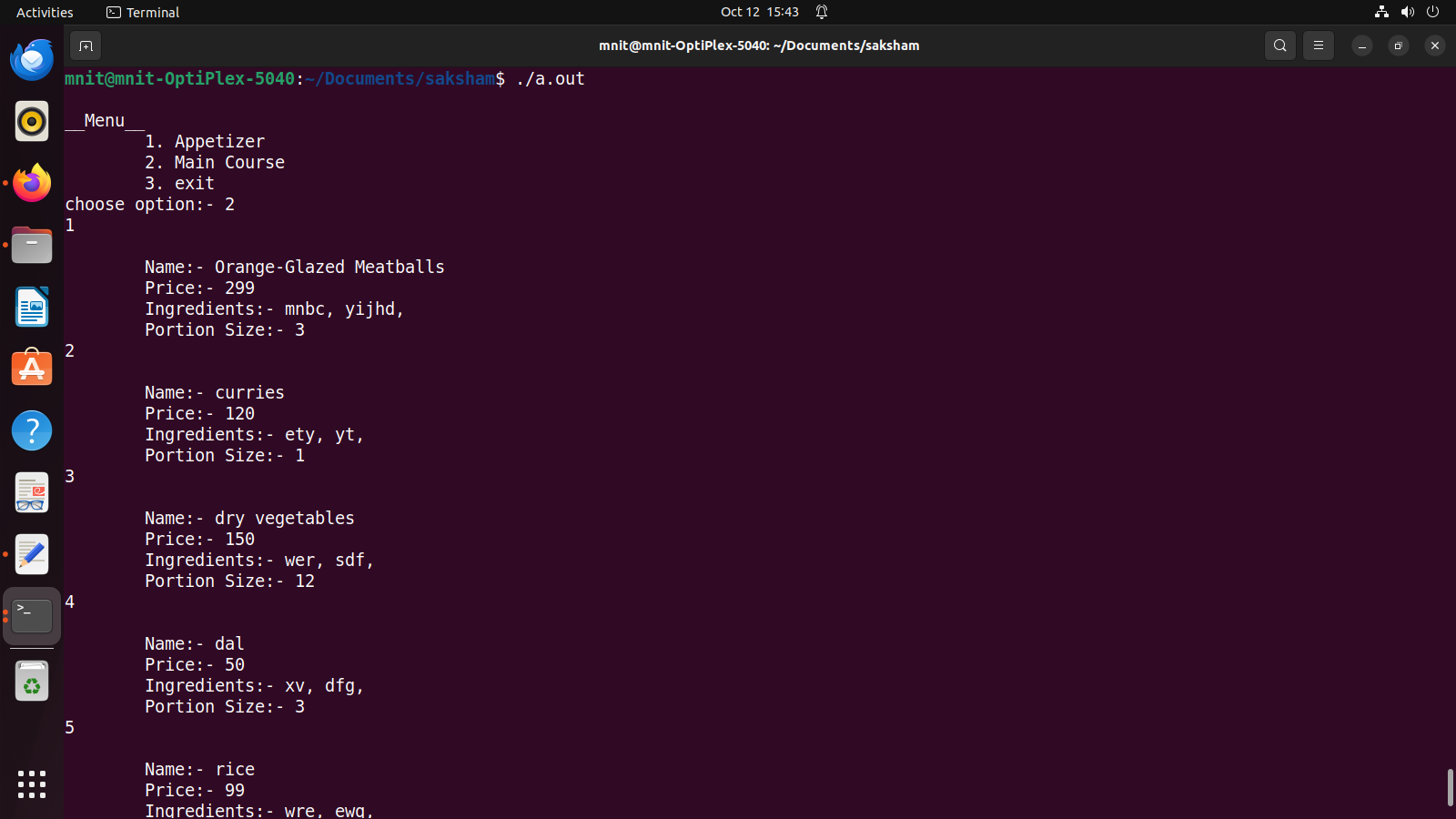
**}**

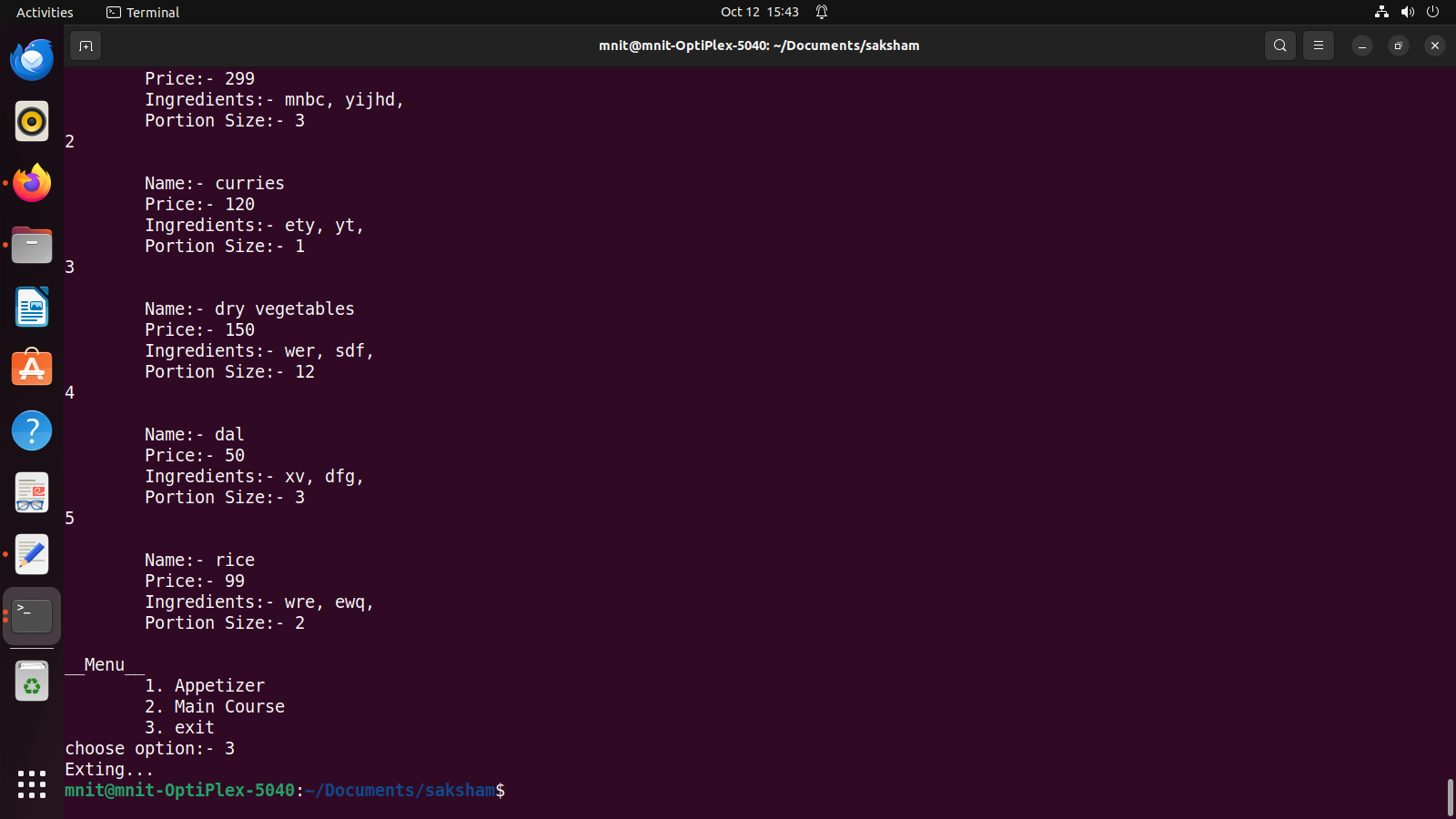
**return 0;**

**}**

**//output**

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