***BT20CSE212 AYUSH PRATAP SINGH***

***GROUP-7***

***Question-14 Pizza***

/\*

Q14. Create a class named Pizza that stores information about a //single pizza//.

//It should contain the following:

//Private instance variables to store the size of the pizza (either small, medium, or large),

//the number of cheese toppings, the number of pepperoni toppings, and the number of ham toppings.

//Constructor(s) that set all of the instance variables.

//Public methods to get and set the instance variables.

//A public method named calcCost( ) that returns a double that is the cost of the pizza.

//Pizza cost is determined by:

//Small: $10 + $2 per topping

//Medium: $12 + $2 per topping

//Large: $14 + $2 per topping

//A public method named getDescription() that returns a String containing the pizza size,

//quantity of each topping, and the pizza cost as calculated by calcCost().

//getDescription() example:

//large Pizza with 0 Cheese toppings, 0 Pepperoni toppings, and 2 Ham toppings.

//Total Price : 18.0

//\*/

#include <bits/stdc++.h>

#include <algorithm>

#include <iostream>

#include<string>

using namespace std;

const char nl = '\n';

class Pizza

{

private:

string sizeofPizza;

int cheeseToppings;

int pepperoniToppings;

int hamToppings;

public:

Pizza(string, int, int, int);

// Setter

void setSize(int s)

{

sizeofPizza = s;

}

// Getter

string getSize()

{

return sizeofPizza;

}

void setCheeseTopping(int cheeseTopping)

{

cheeseToppings = cheeseTopping;

}

int getCheeseTopping()

{

return cheeseToppings;

}

void setPepperoniTopping(int pepperoniTopping)

{

pepperoniToppings = pepperoniTopping;

}

int getPepperoniTopping()

{

return pepperoniToppings;

}

void setHamTopping(int hamTopping)

{

hamToppings = hamTopping;

}

int getHamTopping()

{

return hamToppings;

}

double calcCost()

{

transform(sizeofPizza.begin(), sizeofPizza.end(), sizeofPizza.begin(), ::tolower);

string s1 = "small";

string s2 = "medium";

if (sizeofPizza.compare(s1) == 0)

{

return (cheeseToppings + pepperoniToppings + hamToppings) \* 2 + 10;

}

else if (sizeofPizza.compare(s2) == 0)

{

return (cheeseToppings + pepperoniToppings + hamToppings) \* 2 + 12;

}

else

{

return (cheeseToppings + pepperoniToppings + hamToppings) \* 2 + 14;

}

}

string getDescription()

{

return "You ordered a Pizza of size " + sizeofPizza + " with " + to\_string(cheeseToppings) + " Cheese toppings, " + to\_string(pepperoniToppings) + " Pepperoni toppings and " + to\_string(hamToppings) + " Ham toppings." + "\nTotal Price: $" + to\_string(calcCost());

}

};

Pizza::Pizza(string size, int cheeseTopping, int pepperoniTopping, int hamTopping)

{

sizeofPizza = size;

cheeseToppings = cheeseTopping;

pepperoniToppings = pepperoniTopping;

hamToppings = hamTopping;

}

int main()

{

Pizza ayush\_01("small",1,1,1);

cout<<ayush\_01.getDescription()<<nl;

cout<<nl;

Pizza ayush\_02("large",1,1,2);

cout<<ayush\_02.getDescription()<<nl;

cout<<nl;

//cout<<ayush\_02.calcCost();

Pizza ayush\_03("MEDIUM",5,5,5);

cout<<ayush\_03.getDescription()<<nl;

cout<<nl;

}

//this code is written by Ayush Pratap Singh

//BT20CSE212

***OUTPUT-***

PS D:\CPP> cd "d:\CPP\" ; if ($?) { g++ oopslab2.cpp -o oopslab2 } ; if ($?) { .\oopslab2 }

You ordered a Pizza of size small with 1 Cheese toppings, 1 Pepperoni toppings and 1 Ham toppings.

Total Price: $16.000000

You ordered a Pizza of size large with 1 Cheese toppings, 1 Pepperoni toppings and 2 Ham toppings.

Total Price: $22.000000

You ordered a Pizza of size medium with 5 Cheese toppings, 5 Pepperoni toppings and 5 Ham toppings.

Total Price: $42.000000

