#include "stdafx.h"

#include <iostream>

#include <string>

using namespace std;

class Ship {

private:

string nameOfShip;

int yearBuilt;

public:

void setNameOfShip(string s) {

nameOfShip = s;

}

void setYearBuilt(int yb)

{

yearBuilt = yb;

}

int getYearBuilt()

{

return yearBuilt;

}

string getShipName()

{

return nameOfShip;

}

Ship(string s = "", int yb = 0)

{

setNameOfShip(s);

setYearBuilt(yb);

}

virtual void print()

{

cout << "Ship: " << nameOfShip << endl;

cout << "Year Built: " << yearBuilt << endl;

cout << "\n";

}

};

class CruiseShip : public Ship

{

private:

int numOfPassengers;

public:

CruiseShip(string streeng = "", int yb = 0, int passengers = 0) :Ship(streeng, yb) {

setPassengers(passengers);

}

void setPassengers(int passengers) {

numOfPassengers = passengers;

}

int getNumOfPassengers() {

return numOfPassengers;

}

virtual void print()

{

cout << "Ship Name: " << getShipName() << endl;

cout << "Maximun number of Passengers: " << numOfPassengers << endl;

cout << "\n";

}

};

class CargoShip : public Ship {

private:

int cargo;

public:

CargoShip(string streeng = "", int yb = 0, int passengers = 0) : Ship(streeng, yb) {

setCargoCapacity(passengers);

}

void setCargoCapacity(int passengers) {

cargo = passengers;

}

int getCargoCapacity() {

return cargo;

}

virtual void print() {

cout << "Ship Name: " << getShipName() << endl;

cout << "Amount of Cargo: " << cargo << endl;

cout << "\n";

}

};

void getUserInput(string& nameOfShip, int& yearBuilt)

{

cout << "Enter the ship's name: ";

cin >> nameOfShip;

cout << "Enter the year that ship was built: ";

cin >> yearBuilt;

cout << endl;

}

void getCruiseShipInput(string& nameOfShip, int& yearBuilt, int& numOfPassengers)

{

getUserInput(nameOfShip, yearBuilt);

cout << "Enter the number of passengers on the ship: ";

cin >> numOfPassengers;

cout << endl;

}

void getCargoShipInput(string& nameOfShip, int& yearBuilt, int& cargo)

{

getUserInput(nameOfShip, yearBuilt);

cout << "Enter the cargo capacity of the ship: ";

cin >> cargo;

cout << endl;

}

int main()

{

string nameOfShip;

int yearBuilt;

int numOfPassengers;

int cargo;

cout << "GENERAL SHIP\n" << endl;

getUserInput(nameOfShip, yearBuilt);

Ship genShip(nameOfShip, yearBuilt);

genShip.print();

cout << "CRUISE SHIP\n" << endl;

getCruiseShipInput(nameOfShip, yearBuilt, numOfPassengers);

CruiseShip cruiseShip(nameOfShip, yearBuilt, numOfPassengers);

cruiseShip.print();

cout << "CARGO SHIP\n" << endl;

getCargoShipInput(nameOfShip, yearBuilt, cargo);

CargoShip cargShip(nameOfShip, yearBuilt, cargo);

cargShip.print();

return 0;

}