# שאלה 2 – C++ (30 נק')

#ifndef DPT\_STORE

#define DPT\_STORE

#include<iostream>

#include<exception>

#include<string>

#include<map>

#include<set>

class ErrorMessage : public exception

{

public:

ErrorMessage(string msg) : msg\_(msg) {}

const char\* what() const throw()

{

return msg\_.c\_str();

}

private:

string msg\_;

};

class DptStore

{

public:

DptStore(const string& storeName) : storeName\_(storeName)

{

if (storeNamesSet.find(storeName) != storeNamesSet.end())

throw ErrorMessage("Store name already exists");

storeNamesSet.insert(storeName);

}

~DptStore()

{

auto nameIterator = storeNamesSet.find(storeName\_);

storeNamesSet.erase(nameIterator);

}

void AddItem(const string& prodNum, int price)

{

bool itemExists;

try

{

int& prodPrice = storeItemsMap.at(prodNum);

itemExists = true;

}

catch (...)

{

itemExists = false;

}

if (itemExists == false)

{

if (price <= 0)

throw ErrorMessage("Please specify a price greater than 0 when creating a new item");

else

storeItemsMap[prodNum] = price;

}

try

{

inventory.at(prodNum)++;

}

catch (...)

{

inventory[prodNum] = 1;

}

}

void SellItem(const string& prodNum)

{

try

{

int& itemInventory = inventory.at(prodNum);

int price = storeItemsMap.at(prodNum);

if (itemInventory == 0)

throw "No Item";

--itemInventory;

cout << "Sold ProdNum: " << prodNum << " for " << price << " dollars" << endl;

}

catch (...)

{

throw ErrorMessage("Item not in stock or doesn't exist");

}

}

private:

static set<string> storeNamesSet;

static map<string, int> storeItemsMap;

map<string, int> inventory;

string storeName\_;

};

set<string> DptStore::storeNamesSet;

map<string, int> DptStore::storeItemsMap;

#endif // !DPT\_STORE