

AST21105

Object-Oriented Programming and Design

Group Project

Group 35

Group member and Student ID

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Programme of Study

Information Systems Development

Tutor's Name:

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Program Description:

to write a program to handle the scout team's camping equipment loan. The system tracks camping equipment loans. The system checks the level of the user, and depending on the level of the user, the system determines whether such a loan is allowed. The system also tracks the loan history. For the convenience of the user, the system allows the administrator to insert text files in a specified format for bulk data insertion. Data insertion is the insertion of a batch of users and the insertion of a batch of camping equipment. The system can use the user ID and password as admin and admin to save the default administrator ID.

Roles of User for a Scout Members and Scouters:

The reconnaissance team has several parts, but the loan system only works in three parts. Scouts (part), venture scouts, rover scouts. There are several scouts in each section. Each member has attributed such as ID, name, part, date of birth and address.

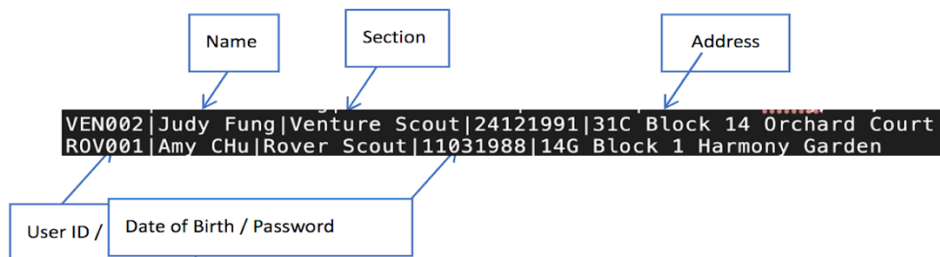


Function of Default administrator:

- Insert a list file containing bulk users and bulk camp equipment. These two files have their own fixed format.
- View loan records, including loan date, camping equipment item ID, project name, borrower's name, return date, status (loans, returns returns).
- Display a list of camping equipment (by category: tents, lanterns, stoves)
- Update the device status

Generate a .txt file containing all updated data, such as loan records and equipment list.

Rover scouts and venture scouts:



Scouts:

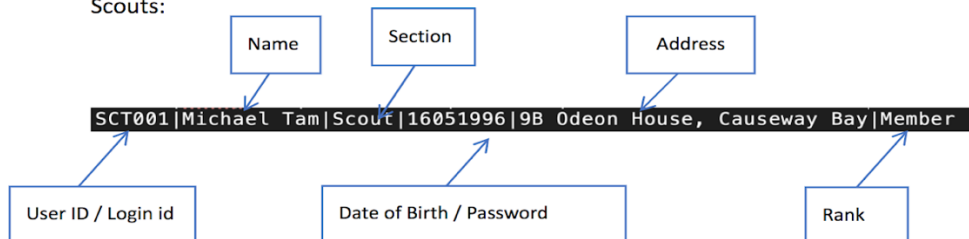


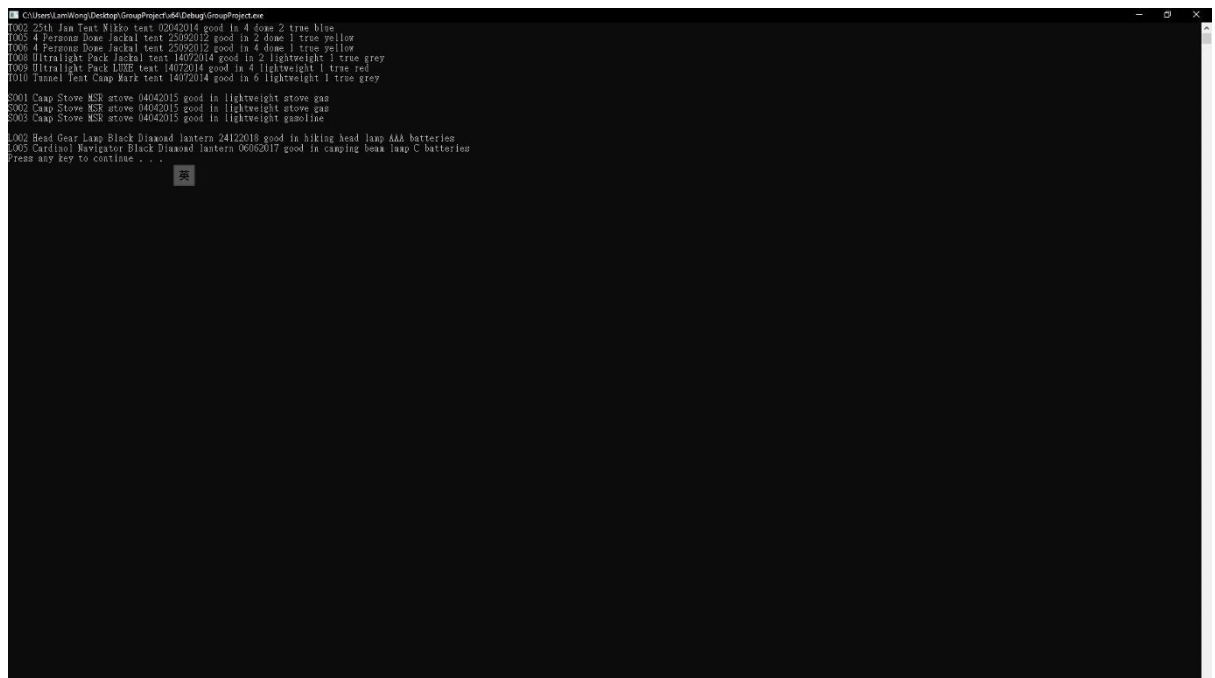
Figure 1Rover scouts and scouts data explanation

```
1.Display equipment
2.Loan equipment
3.Give back the equipment
4.Check the record
5.Exit the program
```

Four Main Function of menu page:

You will see that menu after login.

- 1.Display equipment



The screenshot shows a Windows application window titled "C:\Users\LamWong\Desktop\GroupProject\obj\Debug\GroupProject.exe". The application displays a list of equipment items in a text-based format. The items are as follows:

- 1002 25th Jan Tent Nikko tent 02042014 good in 4 dome 2 true blue
- 1003 4 Persons Dome Jackal tent 25092012 good in 2 dome 1 true yellow
- 1004 4 Persons Dome Jackal tent 25092012 good in 4 dome 1 true yellow
- 1006 Ultralight Pack Jackal tent 14072014 good in 2 lightweight 1 true grey
- 1008 Ultralight Pack HUE tent 14072014 good in 4 lightweight 1 true red
- 1010 Tunnel Tent Camp Mark tent 14072014 good in 6 lightweight 1 true grey
- 2001 Camp Stove MSR stove 04042015 good in lightweight stove gas
- 2002 Camp Stove MSR stove 04042015 good in lightweight stove gas
- 2003 Camp Stove MSR stove 04042015 good in lightweight gasoline
- 3002 Head Gear Lamp Black Diamond lantern 24122018 good in hiking head lamp AAA batteries
- 3005 Cardinal Navigator Black Diamond lantern 06082017 good in camping head lamp C batteries

At the bottom of the list, it says "Press any key to continue . . .". A small button with the Chinese character "英" (English) is visible below the text.

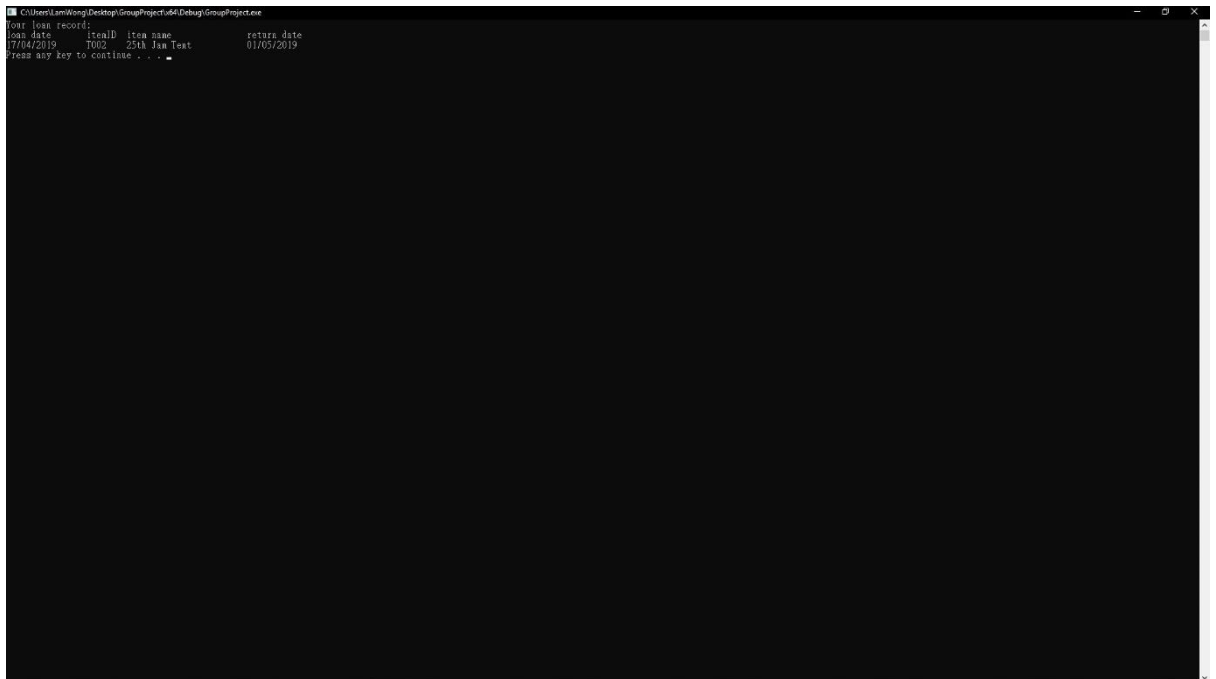
- 2.Loan equipment

```
C:\Users\LamWong\Desktop\GroupProject\ub4\Debug\GroupProject.exe
You can borrow at most 3 item.
What would you like to borrow?
Type 0 if you only borrow 1 thing
Input at most 3 itemID to borrow:T001
0
T001 cannot be lend.
You borrow 0 equipments.
What would you like to borrow?
Type 0 if you only borrow 1 thing
Input at most 3 itemID to borrow:T002
0
You borrow 1 equipments.
Press any key to continue . . .
```

- 3.Return equipment back to the store

```
C:\Users\LamWong\Desktop\GroupProject\ub4\Debug\GroupProject.exe
Your loan record:
loan date      itemID  item name      return date
17/04/2019     T002   25th Jan Test  01/05/2019
Which item you would like to return? T002
Return Success!
Press any key to continue . . .
```

- 4. Check the record



For example:

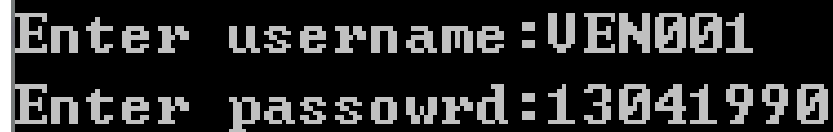
Press 1 for Display the equipment, you will see all the equipment on the system.

```
Tent:
T001:25th Jan Tent!Nikko!tent!02042014!good!in!4!dome!2!true!blue!
T002:25th Jan Tent!Nikko!tent!02042014!good!in!4!dome!2!true!blue!
T004:Family Tent!LUXE!tent!12042008!damaged!in!4!wall!10!true!orange!
T005:4 Persons Dome!Jackal!tent!25092012!good!in!2!dome!1!true!yellow!
T006:4 Persons Dome!Jackal!tent!25092012!good!in!4!dome!1!true!yellow!
T007:4 Persons Dome!Jackal!tent!25092012!disposed!in!4!dome!2!true!yellow!
T008:Ultralight Pack!Jackal!tent!14072014!good!in!2!lightweight!1!true!grey!
T009:Ultralight Pack!LUXE!tent!14072014!good!in!4!lightweight!1!true!red!
T010:Tunnel Tent!Camp Mark!tent!14072014!good!in!6!lightweight!1!true!grey!

Stove:
S001:Camp Stove!MSR!stove!04042015!good!in!lightweight!stove gas!
S002:Camp Stove!MSR!stove!04042015!good!in!lightweight!stove gas!
S003:Camp Stove!MSR!stove!04042015!good!in!lightweight!gasoline!

Lantern:
L001:Head Gear Lamp!Black Diamond!lantern!24122018!good!in!hiking!head lamp!AAA
batteries!
L002:Head Gear Lamp!Black Diamond!lantern!24122018!good!in!hiking!head lamp!AAA
batteries!
L005:Cardinol Navigator!Black Diamond!lantern!06062017!good!in!camping!bean lamp
!C batteries!
```

How to Login to our system:

A terminal window with a black background and white text. The first line reads 'Enter username:VEN001' and the second line reads 'Enter passowrd:13041990'.

```
Enter username:VEN001
Enter passowrd:13041990
```

1. You have to enter your username
2. You enter your password
3. You will see the menu page

You can find your Username and Password on the User.TXT file.

Three major Camp Equipment:

1. Tent
2. Stoves
3. Lantern

Each device has a product ID, item name, product name, item type (amount, furnace, light). Number of days purchased (DDMM YY YY), status (good, damaged, under repair or Different types of devices are more advanced.

Only certain types of attributes will be described in detail.

Detail of the Three Major Equipment:

A tent: is a camping device that can be further described in these attributes: tent size as (2, 4, 6, 8, 10 and 16), tent type (lightweight, family, wall, tunnel or dome), number of doors (2,4,6) which for the exit and entry the tent.

Lantern: has the following specific attributes: Lantern Size (Hike or Camping), lampType (Headlight, Desk lamp, LED and Beam light) and

fuelType (AA Battery, AAA Battery) C Battery, D battery, stove gas, screw gas).

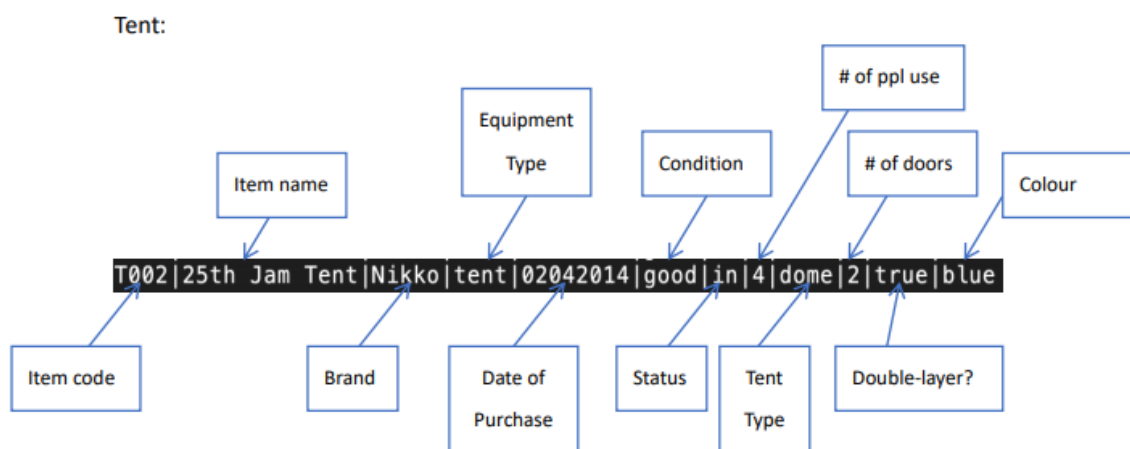
AST 21105-Group Project Version 3 (February 11, 2019) 3 Stoves The stove has the following specific characteristics. Stove type (super lightweight, light weight, bench) and fuel type (cooking gas, screw gas, wax)

How to read the table of Camp Equipment File

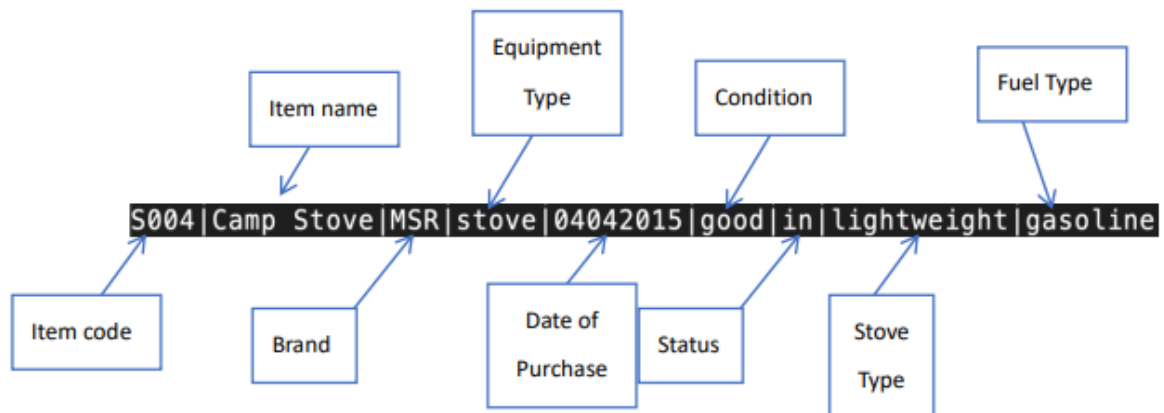
All supplies are placed in text files. The first letter of the product code is

Type of equipment: T for tents, S for stoves, L for lanterns. Different format

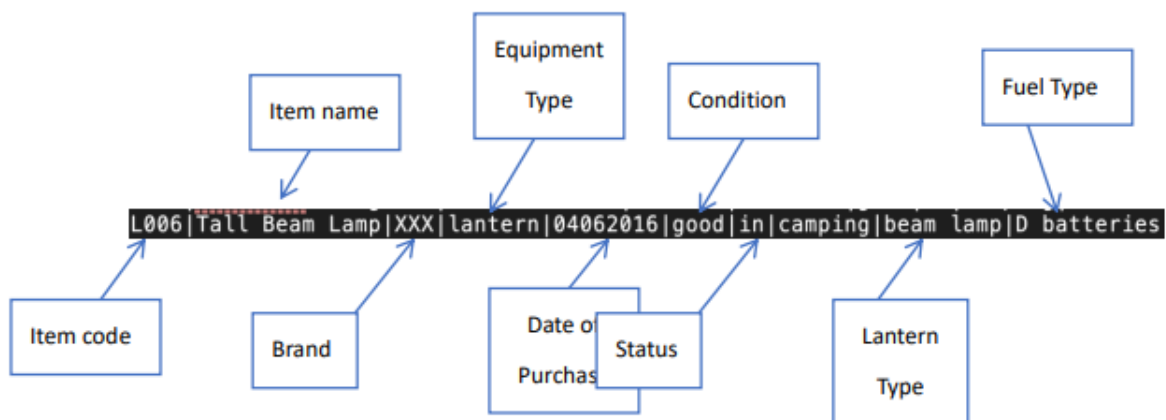
Various equipment.



Stove:



Lantern:



Using an Administrator account

- You can insert a list file containing bulk users and batch camps

Equipment These two files have their own fixed format and are discussed



later.

Admin function list

- When you are using administrator account, The display includes the date of the loan, the item ID of the camping equipment, and the project name.

Borrower's name, date of return, status (loan. If equipment was returned, return).

```

C:\Users\LamWong\Desktop\GroupProject\64\Debug\GroupProject.exe
Loan Data:
Loan date:      Item code   Item Name      User      Return date   Status
16/04/2019      L001      Head Gear Lamp 30/04/2019
17/04/2019      T002      25th Jan Tent 01/05/2019
17/04/2019      S002      Camp Stove      01/05/2019
17/04/2019      L002      Head Gear Lamp 01/05/2019
17/04/2019      T002      25th Jan Tent 01/05/2019
Press any key to continue . . .

```

Admin function-view own record function

- Display all of camping equipment (by category: tents, lanterns, stoves).
- Update the status of the device.

```

C:\Users\LamWong\Desktop\GroupProject\64\Debug\GroupProject.exe
tent
T001|25th Jan Tent|Kikkotent|02042014|good|in|4|dome|2|true|blue
T002|25th Jan Tent|Kikkotent|02042014|good|in|4|dome|2|true|blue
T003|25th Jan Tent|Kikkotent|02042014|good|out|4|dome|2|true|blue
T004|Family Tent|HUS tent|12042008|damaged|in|4|wall|1|0|true|orange
T005|4 Persons Dome|Jackall tent|25092012|good|in|2|dome|1|true|yellow
T006|4 Persons Dome|Jackall tent|25092012|good|in|4|dome|1|true|yellow
T007|4 Persons Dome|Jackall tent|25092012|disposed|in|4|dome|2|true|yellow
T008|0|tr|aight Pack|Jackall tent|14072014|good|in|2|lightweight|1|true|grey
T009|Ultra Light Pack|HUS tent|14072014|good|in|4|lightweight|1|true|red
T010|Tunnel Tent|Cap Mark tent|14072014|good|in|6|lightweight|1|true|grey


Stove
S001|Camp Stove|MSR|stove|04042015|good|in|lightweight|stone gas
S002|Camp Stove|MSR|stove|04042015|good|in|lightweight|stone gas
S003|Camp Stove|MSR|stove|04042015|good|in|lightweight|gasoline

Lantern
L001|Head Gear Lamp|Black Diamond|lantern|24122018|good|in|hiking|head lamp|AAA batteries
L002|Head Gear Lamp|Black Diamond|lantern|24122018|good|in|hiking|head lamp|AA batteries
L003|Mojji Lantern|Black Diamond|lantern|06062017|good|out|camping|led lamp|AA batteries
L004|Mojji Lantern|Black Diamond|lantern|06062017|good|out|camping|led lamp|AA batteries
L005|Cardinal Navigator|Black Diamond|lantern|06062017|good|in|camping|head lamp|C batteries
Press any key to continue . . .

```

- Admin function-display all equipment

- Generate a .txt file containing all updated data, such as loan records and equipment list.



```

C:\Users\LamWong\Desktop\GroupProject\debug\GroupProject.exe
1) Inserting .
2) Output a txt file .
3) Display all camp equipment.
4) Update equipment.
5) Loan records.
6) Exit.
Enter the number(1 - 6):

```

- Function 2 is open a new txt file

Aims Of the program

- When a user logs in to the system, the system displays a menu. We have the following of View a list of available camping gear by category.
- When the user selects this option, the system displays a list of available devices by category.
- Only the "good" conditions and items not borrowed will be displayed in the list.
- View user loan history - If the user borrows a device, borrow the device list and the user is displayed.
- Submenu for providing device loans (only for users without device loans)
- How to borrow money, there are items that can not be made to the user, this option is not available.

- Systems that the user does not have an item provides a menu, Users get items from the scout group by funds, licenses, and user ranks.
- The default product date for all device loans is 14 days.