



12 Pages

1. Please give the information requested in the boxes below.
2. Enter your name in the space provided to the right, fold over the flap and seal down (using the label provided) to hide your name.
3. The answers must be legibly written. The Examiners cannot read illegible script or handwriting.
4. Write your answers in ink.
5. Begin each answer on a fresh page. Do all rough work in the answer book and cross it through.
6. No part of this book is to be torn out; it must be handed in complete.
7. If more books than one are used, fasten them together using the tags available from the invigilator(s).
8. **Every book must be handed in. In no circumstances may answer books, used or unused, be taken out of the examination venue.**

1	Student Number	P151512
2	Title of Examination Paper	Object oriented Programming
3	Module Code	M28523
4	Date and Time of Examination	18/5/18 9.00 am
5	Examination Venue	M4107A
6	Seat Number	4
7	Number of Answer Books handed in	

[illegible]

Qu A

Actors

Customer

~~Finance checker~~

Library database

~~Finance checker~~

Finance checker

Use Cases

Financial check

Existing record check

Recover account

Details added to system

Order book

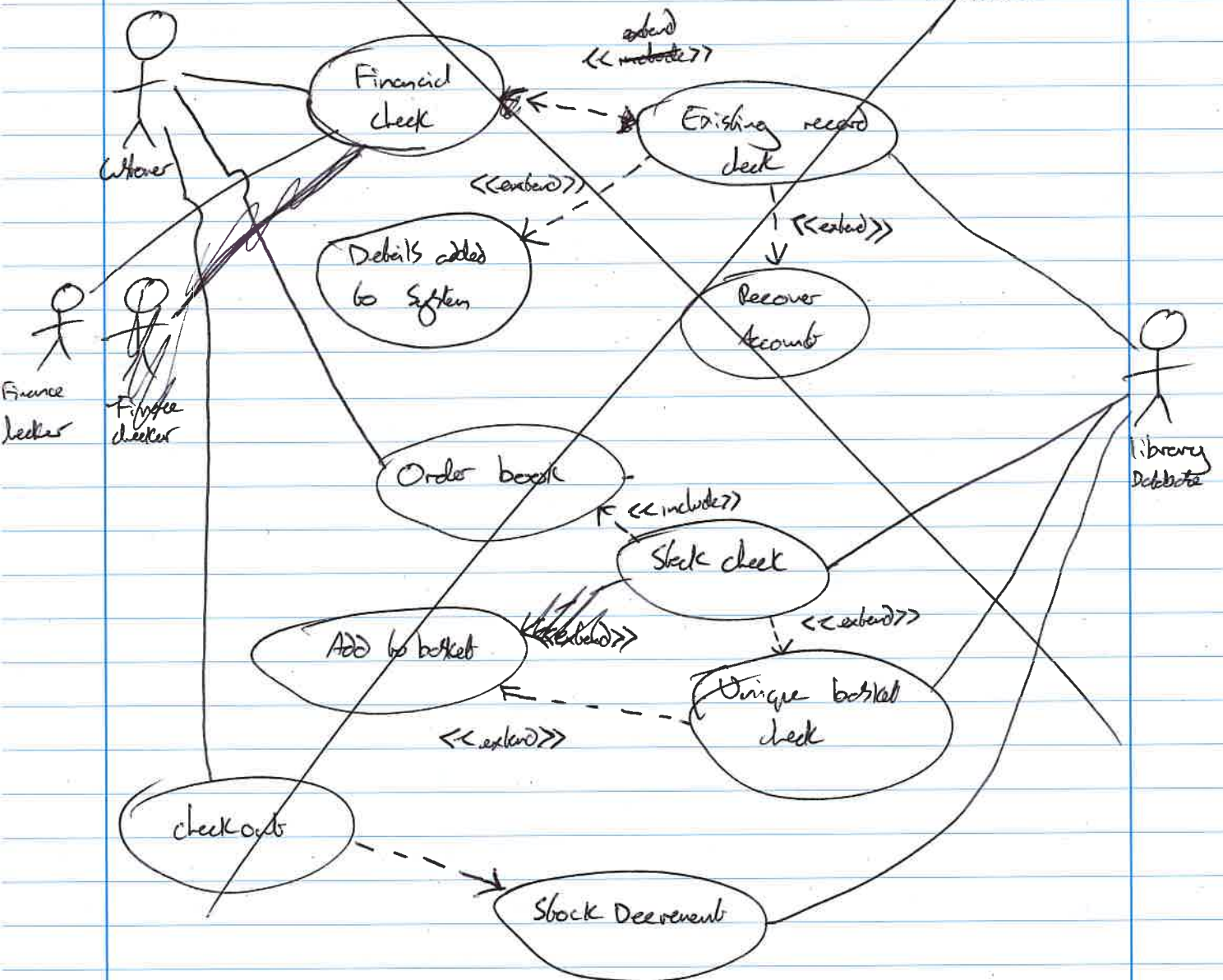
Stock check

Unique basket check

Stock Decrement

Add to basket

checkout



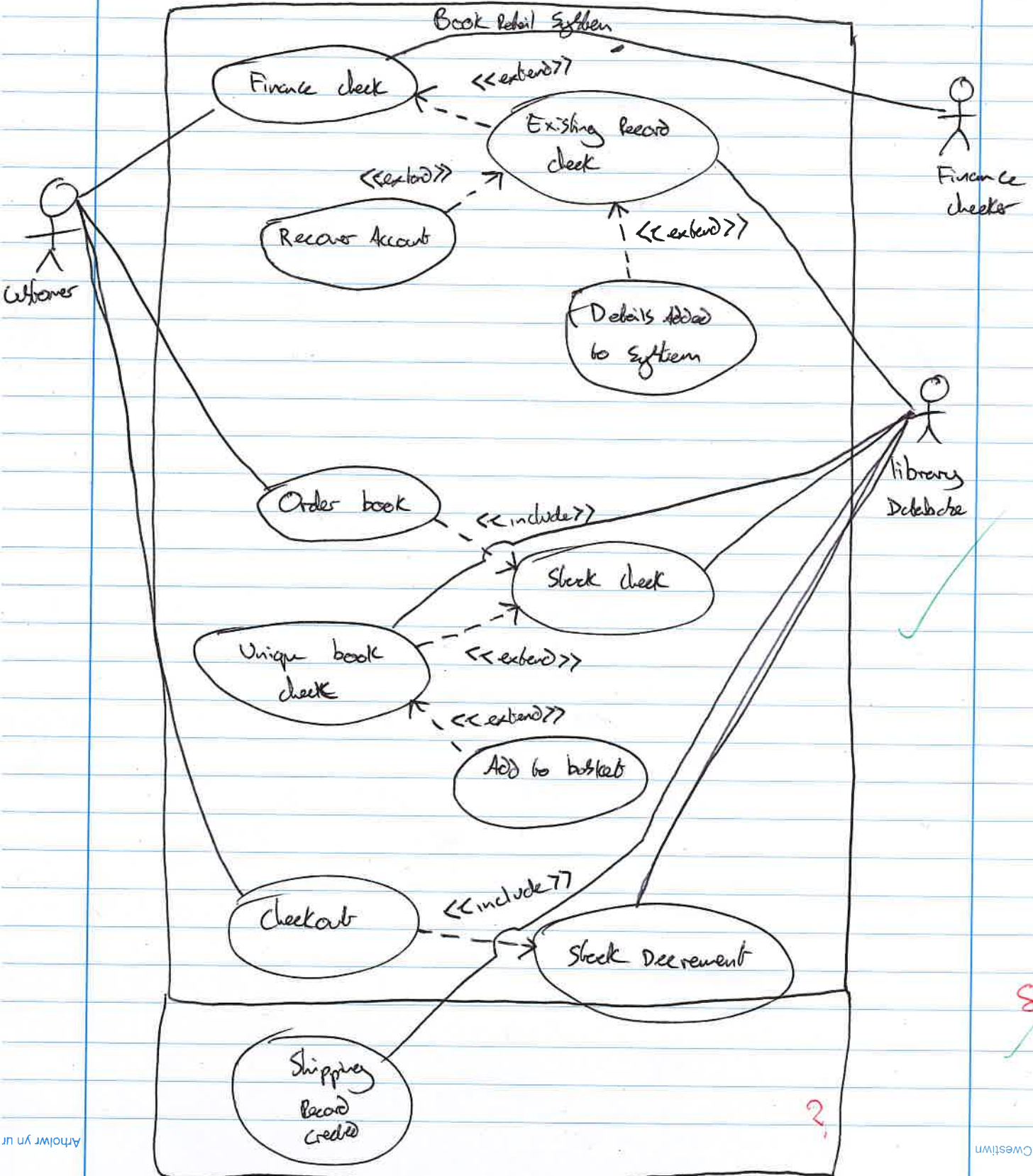
Q4 a)

Actors

Customer
Library Database
Finance checker

Use Cases

Financial check
Record check
Recover Account
Add details to system
Order book
Stock check
Unique book check
Add to basket
checkout
Stock Decrement



8

2

P151512.

Q2 a)

Lines 9-19 are determining the private and public attribute variables of the class GameElement.

Line 17 is the default constructor.

Line 21-28 is a constructor for the class and instantiates the variables defined in private.

Line 30 is a deconstructor.

Line 32-44 contains a function. This function creates a sprite if the spriteIndex is less than the pathCount and adds that sprite to the spriteIndex. If it is not lesser however the spriteIndex remains unchanged.

Line 57-82 creates a new class Collectable. This class inherits from the class GameElement.

Line 59-62 determines the attribute variables for this class.

Line 63 is the default constructor.

Line 65 overloads the variables, and also inherits some values from the class GameElement.

Line 66-69 instantiate the variables.

Line 71 is the deconstructor.

Line 73-76 'Gets' the _rarity variable value and returns the value.

Line 78-81 'Gets' the _score variable value and returns it.

Line 86 creates the RenderElement function and creates a pointer to the GameElement constructor.

Line 90-91 determines the char * coinPaths[] and the char* bonusPaths[] to both be equivalent to images.

Line 92-93 creates the collectables *coinItem and *bonus Item and assigns them score, rarity, sprite paths, x, y and pCount.

Line 95-105 calls a function depending on the value of i.

Line 107-110 calls the DrawSprite function from the GameElement class.

Q2 b)

There will be no output. This is because all functions are returning 0 and there is no code to directly produce an output to a file or command prompt.

Q3 i)

Handwritten signature

Q2 - 11 (11)

The Agile manifesto contains four sections:

- Individuals and interactions over project progress
- Working prototypes over document process
- Short iterations over larger ones
- Easy adaptability over rigid structure

This allows all methodologies withing the Agile Process to be more dynamic and adaptable.

Q3 ii)

Because of it's manifesto, Agile process is a more dynamic and adaptable approach to a project. As such it is much more suitable for small scale projects. It favours smaller projects with greater interaction between the team and the customers. It utilises more regular updates with the requirements for the project being determined and implemented throughout the entire lifecycle of the project.

Q3 iii)

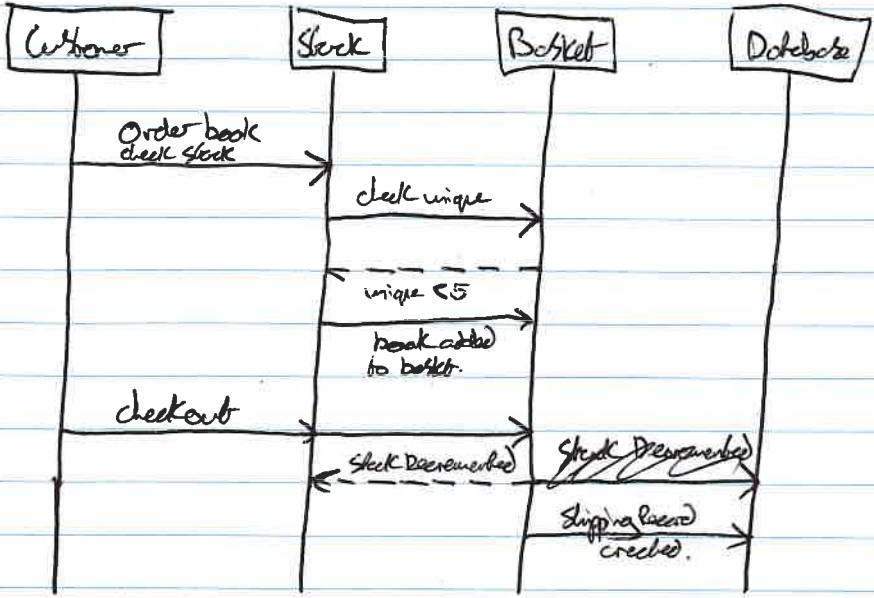
Agile is a more dynamic approach to a project, favouring smaller projects with greater interaction and focus upon the users and their changing requirements. Unified Process however, is more suited for larger scale project, and focuses more heavily upon identifying and combatting the critical risks of a project in the earliest phases. UP also determines the requirements much earlier in the process and as such is much less adaptable. Agile utilises a single stage approach allowing for projects to be changed quickly and for working 'prototypes' to be shown to the customers on a regular basis, this can help to change any requirements and focuses less heavily on the documentation process. UP on the otherhand spreads the workload over multiple phases and the documentation is greatly increasese and more rigid. As such this makes it much more difficult to change and working demonstrations are not available until much later the project lifecycle.

10

Q3-10



Q4 b)



3



Q4 - 11