



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 and seal down (using the label provided) to hide your name.
3. The answers must be legibly written. The Examiners can either require the answer to be in cursive script or have it typed and the expense of typing charged to the candidate.
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	8151746
2	Title of Examination Paper	object oriented Programming.
3	Module Code	M2 X8523
4	Date and Time of Examination	18 th /5/2018 9.00am
5	Examination Venue	Gym (Towahill)
6	Seat Number	G 017.
7	Number of Answer Books handed in	1

List the numbers of the questions you have attempted	Office Use
2	17
3	13
4	14
Total	44

Question 3

(i) Agile is a ~~moder~~ modeling language methodology that uses the Agile manifesto that includes:-

- ① the use of People and Processes over tools.
- ② Use of Customer interaction over specified documentation.
- ③ Use of development over a specified Plan
- ④

(ii) Agile is thought to be Adaptive, ~~whereas~~ whereas WP is ~~not~~ thought of as being more structured.

Agile develops with the use of speaking to a Customer to gain specifications, WP only speaks to the customer at the beginning of the Program Systems life time.

Both are iterative with WP having larger iterations between its four phases (inception, elaboration, construction and transition), agile has smaller iterations ~~and~~ throughout its life cycle and so can be seen as more dynamic.

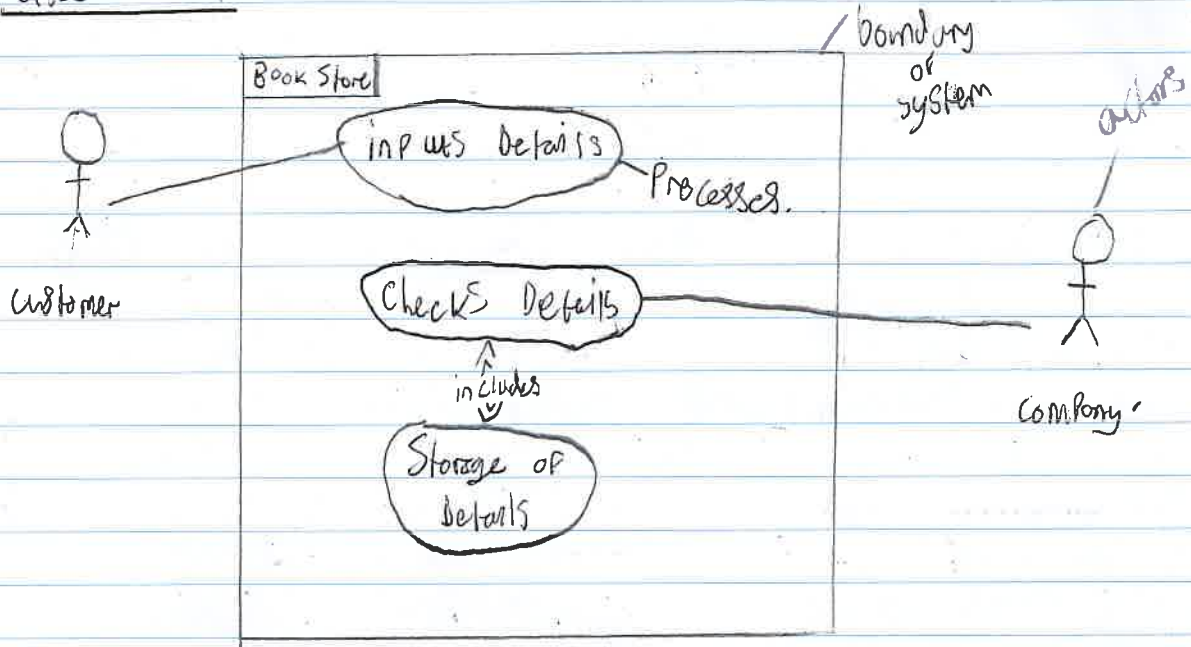
In WP all specifications are defined within its opening phases (inception, elaboration), whereas in Agile specification can be changed throughout the Systems ~~to~~ lifetime.

WP is normally used for Really large System projects and Agile is used for smaller projects where changes are likely to occur.

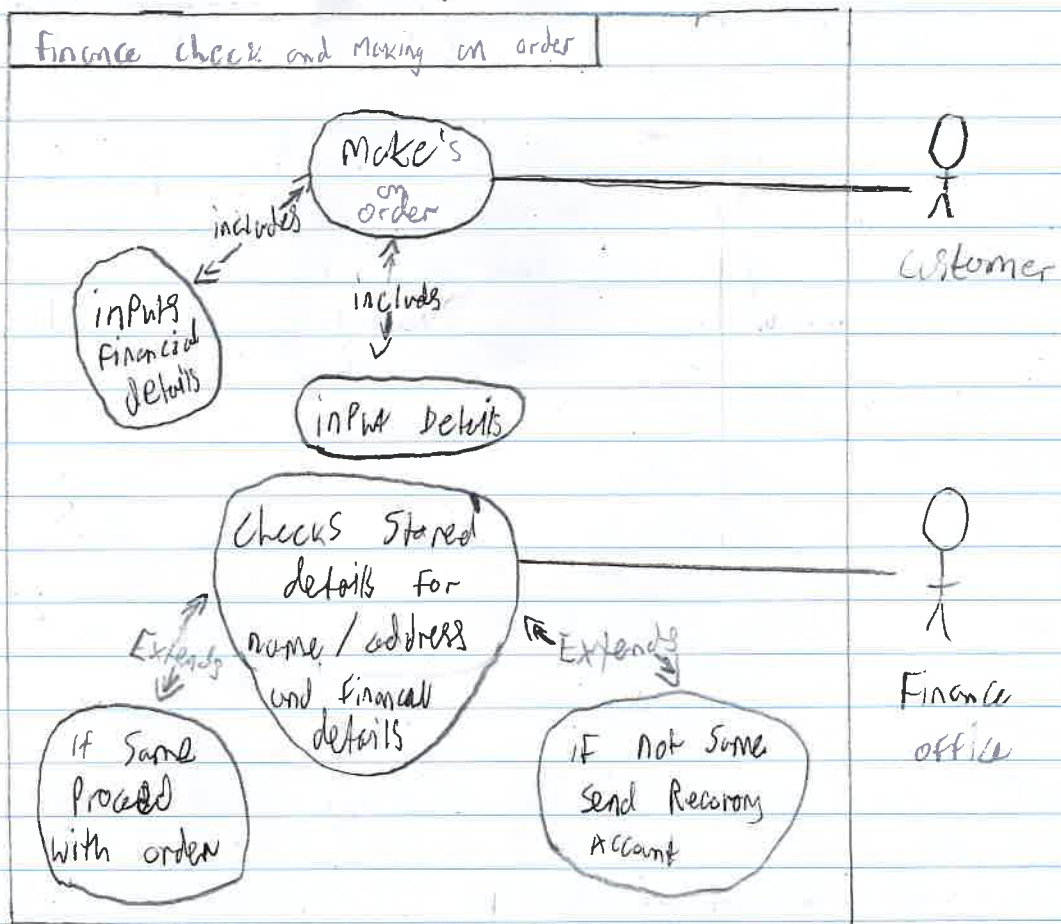
Some Processes that use Agile are: XP, Scrum.

Question 4

(a)

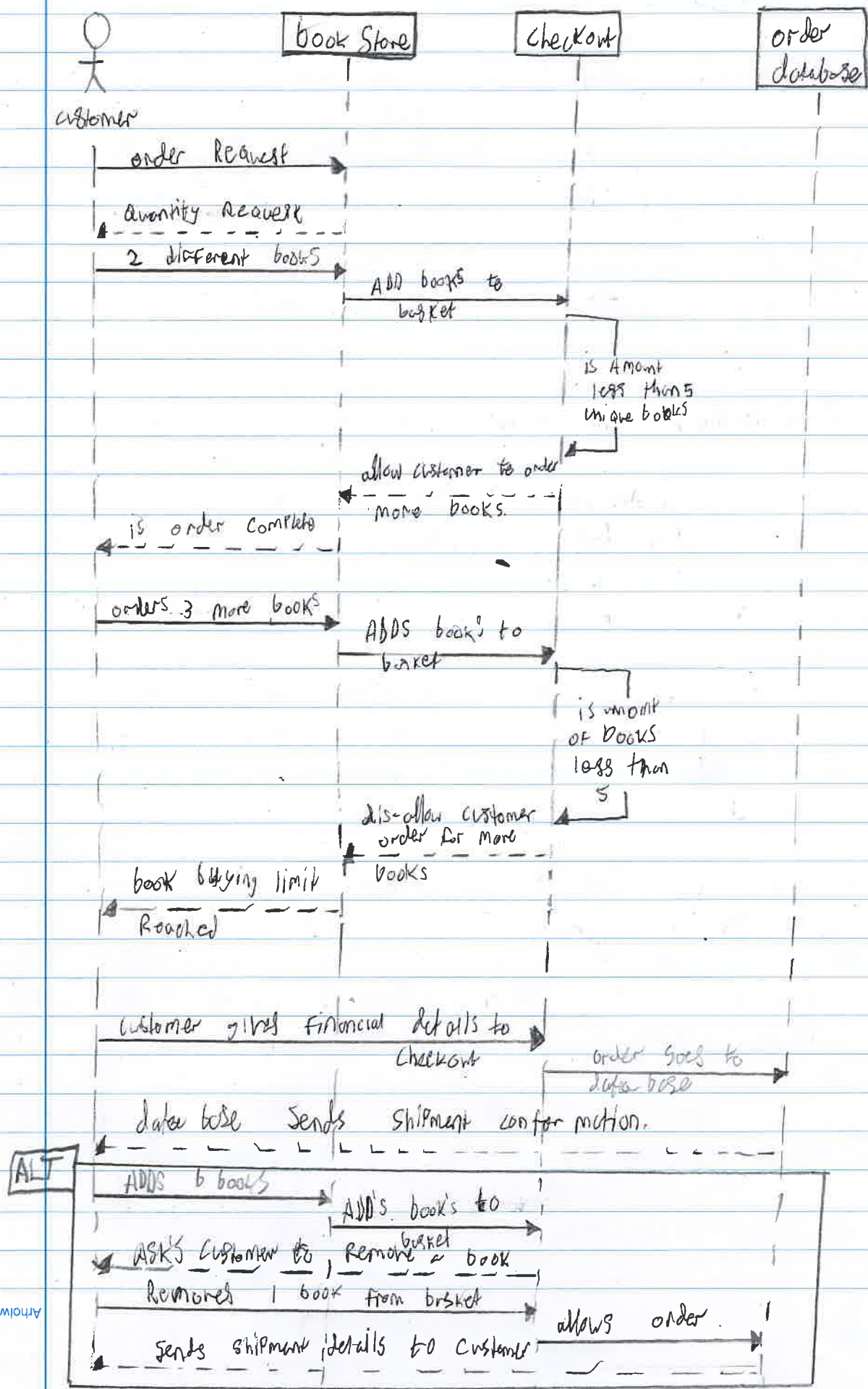


4



5

⑥ Checkout Process: Sequence Diagram



5 ✓
Q4-14
Rhif y Cwestiwn

Question 2

- (a) line 1 - including the input and Pmt library. ✓
- line 3 - allow programs to use standard name spaces ✓
- lines 8-51 - game element class definition ✓
- lines 10-15 - gameElement's private attributes only used within GameElement class. ✓
- lines 16-51 - gameElement's public section including methods and attributes that can be used by whole program ✓
- line 17-19 - Game Element class constructor (default) ✓
- lines 21-28 - an overloaded constructor and publicly defined attributes for Game-element class ✓
- line 30 - GameElements default destructor ✓
- lines 32-44 - method for drawing sprites for a game contains an if else statement that either outputs the sprites - path or sets the sprite index to a value of 0. ✓
- lines 46-50 - method for translating the co-ordinates of the game sprite. ✓
- lines 57-82 - class definition for 'collectable' but also include inheritance of the GameElement class through the :Public key word. ✓
- lines 59-61 - the private variables for collectable class. ✓

lines 62 - 69 - the public section of the collectable class and includes default constructor, overloaded and inherited constructor from the GameElement class and Equating the private ~~variable~~ attributes to usable values for the entire program.

line 71 - ~~defn~~ default destructor for collectable class.

73 - 81 - these are functions for getting a values for rarity and score attributes.

86 - ~~defn~~ ^{Prototype} ~~implementation of method~~ used for Rendering and implementing the game-element class.

88 - 105 - Start of the main game program

90 - 91 - is used for showing images for main and ~~top~~ bonus paths for in-game coins, uses .png files as images.

92 - implementation of collectable class to make new coin collectable values.

93 - implementation of collectable class to make new other collectable values.

both 92 and 93 are overriding the default 'collectable' values.

95 - 104 - is used to Render new coins and bonus collectables for a specified amount.

107 - 110 - using the Prototype from line 86 to Render/draw a game sprite.

26 not answered

Q2 - 15

Question 3 - Continued

(ii)

~~UP~~ is both Agile and UP use UML (Unified Modelling Language) to show the behaviour and structure in a standard way.

Standardisation is better influenced the use of OOPS - object oriented programming.

(iii)

The Agile methodology ~~for~~ is used for small projects where development is very important, as well as it shows the importance to gain specifications through face-to-face ~~met~~ meetings with clients.

this means the development ~~if~~ agile process of the Agile methodology is quicker and more efficient than the other programming standards such as UP.

Agile can also be shown as a cascading development such as a waterfall diagram.