SOFE3650U Final Project: Iteration 3

Group 21

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Step 2: Establish Iteration Goal by Selecting Drivers

The primary use cases that are considered to be supporting the primary functionality of the Yeezy Books system are:

- UC-5
- UC-6
- UC-8

Step 3: Choose One or More Elements of the System to Refine

- Choose the database application server
- Refined the return application to ensure the books are not being retained by the user, added a due date id code to lock the book after the specified due date

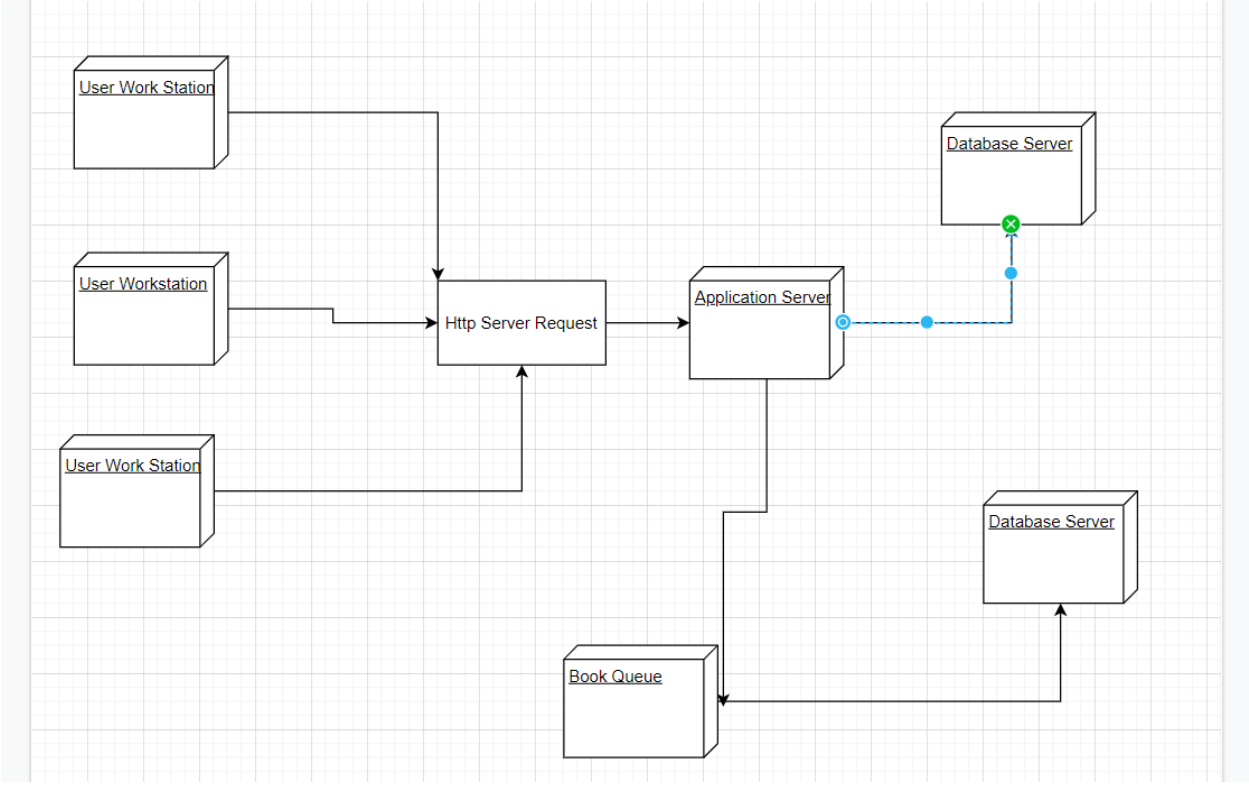
Step 4: Choose One or More Design Concepts That Satisfy the Selected Drivers

Design Decisions	Rationale
Introduce Database server for updates and returns	We are assuming adding another database server will all for an easier time with database modification, while minimizing the loss in scalability.
Introduce a Application server	Online storage cloud for user only supports up to a certain amount of space before technical issues come into play

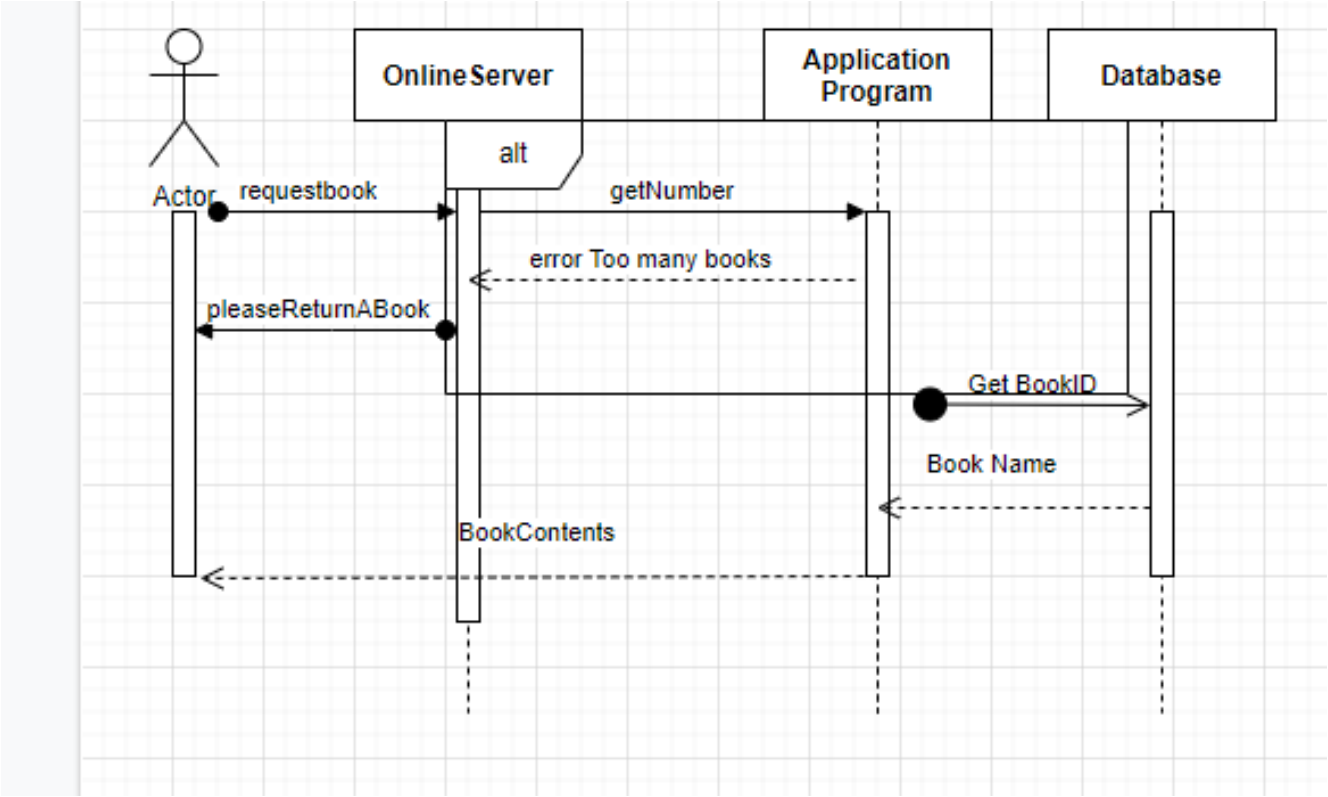
Step 5: Instantiate architectural elements, allocate responsibilities, define interfaces

Design Decisions and Locations	Rationale
Deploy a second database	Deploying a separate server to emphasis UC-5 allowing easier modification when new books are added or older books are removed
Implement an Application Program	Application program will be deployed to restrict a user from taking out more than 5 booka
Implement a Book Return Queue	With the addition of a Book Return Queue we limit the time delay between when someone returns a book and wants to borrow the same book, ensuring every book returned can be processed properly

Step 6: Sketch Views and Record Design Decisions



Updated UML sequence diagram to reflect the introduction of the book return queue as well as the introduction of our application program that limits the books borrowed to only 5.



Step 7: Sketch Views and Record Design Decisions

Not Addressed	Partially Addressed	Completely Addressed	Design Decisions Made During the Iteration
UC-1			N/A
UC-2			N/A
UC-3			N/A

	UC-4		The addition of the application server resulted in a new pop-up display indicating a customer has reached the allocated books allowed to borrow
	UC-5		Employees can now update a separate database server which will not reflect changes in the main server and slow performance
		UC-6	Books borrowed now have a specialized lock ID that can only be unlocked by a system admin
	UC-7		N/A
		UC-8	Returned books are now queued to together by date to ensure they are processed
	QA-1		Addition of a database server allows for employees to keep he scalability of the system high when a large pool of books is added returned or removed
	CON-5		Improved the rate at which books are made available to customers