

**CS7081Enterprise Software Components and Systems Development**

**Coursework Assessment (2017-18)**

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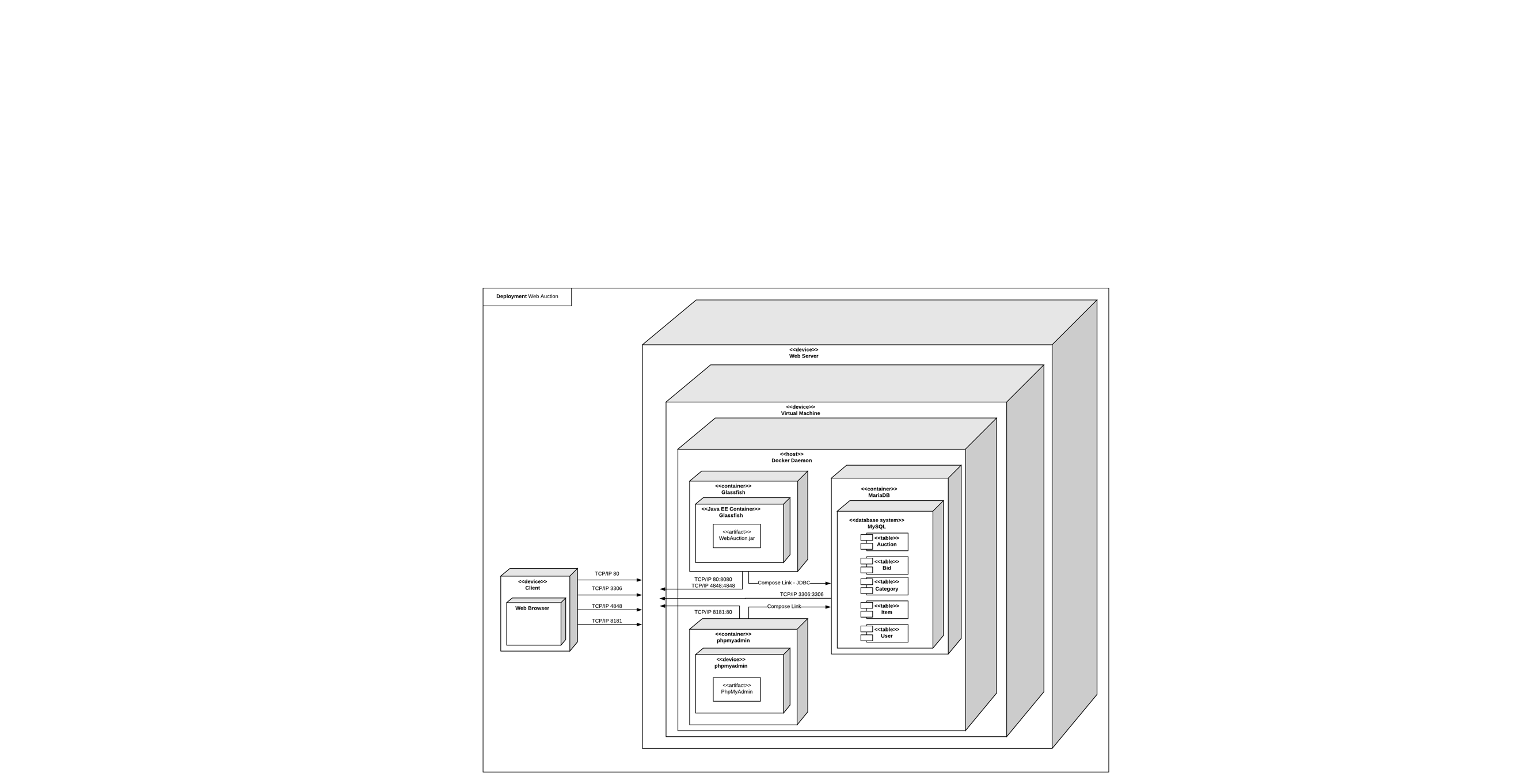
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# Software Architecture

## 1.1 UML Deployment Diagram

Software Architecture is foundation or fundamental design of the software. One of the main reason why the Software Architecture is important is because without it, it could be difficult to maintain or change once built due to a lack of knowledge.



# Database Design

Database Design is the process of creating the structure of the database, identifying the tables, column, input types and the relationship between the tables.

|  |  |  |
| --- | --- | --- |
| Item | | |
| Index | **Name** | **Type** |
| PK | itemid | int(11) |
|  | itemname | varchar(50) |
| FK | catid | int(11) |
| FK | sellerid | int(11) |

|  |  |  |
| --- | --- | --- |
| Category | | |
| Index | **Name** | **Type** |
| PK | catid | int(11) |
|  | catName | varchar(50) |

|  |  |  |
| --- | --- | --- |
| Auction | | |
| Index | **Name** | **Type** |
| PK | auctionId | int(11) |
| FK | itemId | int(11) |
|  | startPrice | double |
|  | currentBid | double |

|  |  |  |
| --- | --- | --- |
| User | | |
| Index | **Name** | **Type** |
| PK | userid | int(11) |
|  | name | varchar(50) |
|  | username | varchar(50) |
|  | password | varchar(50) |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| Bid | | |
| Index | **Name** | **Type** |
| PK | bidid | int(11) |
| FK | auctionId | int(11) |
| FK | bidderId | int(11) |
|  | bidAmount | double |
|  | time | varchar(100) |

## 2.1 SQL DDL Script

CREATE TABLE User

(userid int (11) NOT NULL AUTO\_INCREMENT,

name VARCHAR (50) NOT NULL,

username VARCHAR (20) NOT NULL,

password VARCHAR (20) NOT NULL,

CONSTRAINT PK\_ User PRIMARY KEY (userid));

CREATE TABLE Category

(catid int (11) NOT NULL AUTO\_INCREMENT,

catName VARCHAR (50) NOT NULL,

CONSTRAINT PK\_ Category PRIMARY KEY (catid));

CREATE TABLE Item

(itemid int (11) NOT NULL AUTO\_INCREMENT,

itemname VARCHAR (50) NOT NULL,

catid int (11) NOT NULL,

sellerid int (11) NOT NULL,

CONSTRAINT PK\_ Item PRIMARY KEY (itemid)

CONSTRAINT FK1\_ Item FOREIGN KEY (catid) REFERENCES Category (catid)

CONSTRAINT FK2\_ Item FOREIGN KEY (sellerid));

CREATE TABLE Auction

(auctionId int (11) NOT NULL AUTO\_INCREMENT,

itemId VARCHAR (50) NOT NULL,

startPrice DOUBLE NOT NULL,

currentBid DOUBLE NOT NULL,

CONSTRAINT PK\_ Auction PRIMARY KEY (auctionId),

CONSTRAINT FK\_ Auction FOREIGN KEY (itemId) REFERENCES Item (itemId));

CREATE TABLE Bid

(bidId int (11) NOT NULL AUTO\_INCREMENT,

auctionId int (11) NOT NULL,

bidderId int (11) NOT NULL,

bidAmount DOUBLE NOT NULL,

time VARCHAR (50) NOT NULL,

CONSTRAINT PK\_ Bid PRIMARY KEY (bidId)

CONSTRAINT FK1\_ Bid FOREIGN KEY (auctionId) REFERENCES Auction (auctionId)

CONSTRAINT FK2\_ Bid FOREIGN KEY (bidderId) REFERENCES User (userid));

# Website Design

## 3.1 Page Navigation Map

# Program Description

## 4.1 Use Case Model

### 4.1.1 High Level Use Case

### 4.1.2 Expanded Use Case

## 4.2 Entity Relationship Diagram

## 4.3 Sequence Diagram

## 4.4 Analysis Class Diagram

# Screen Dump Walkthrough

# Deployment

## 6.1 Component Diagram

## 6.2 Deployment and Configuration Instructions