AuctionBase

Project Part 3 Help Session
CS 145
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Agenda

- Functionality Demo
- Using PHP
- Using web.py
- Tips

Required Functionality

- Manually change the "current time".
- Enter bids on open auctions.
- Automatic auction closing.
- See the winner of a closed auction.
- Browse auctions of interest based on at least 3 different criteria.
- Find an auction based on itemID.

PHP

- Starter code
  - timetable.html - HTML fields for selecting time.
  - selecttime.php - Form processing script.
  - sqlitedb.php - Establish connection to DB.
  - currtime.php - Retrieve & display current time.
  - navbar.html - Display links to all pages.

Getting Started

- Copy starter code into a directory in cgi-bin/
- Copy DB into the same directory.
- Change DB name in sqlitedb.php
- Change attribute name in currtime.php
- Test correct "current time" gets displayed when currtime.php is requested.

The Client-Server Model
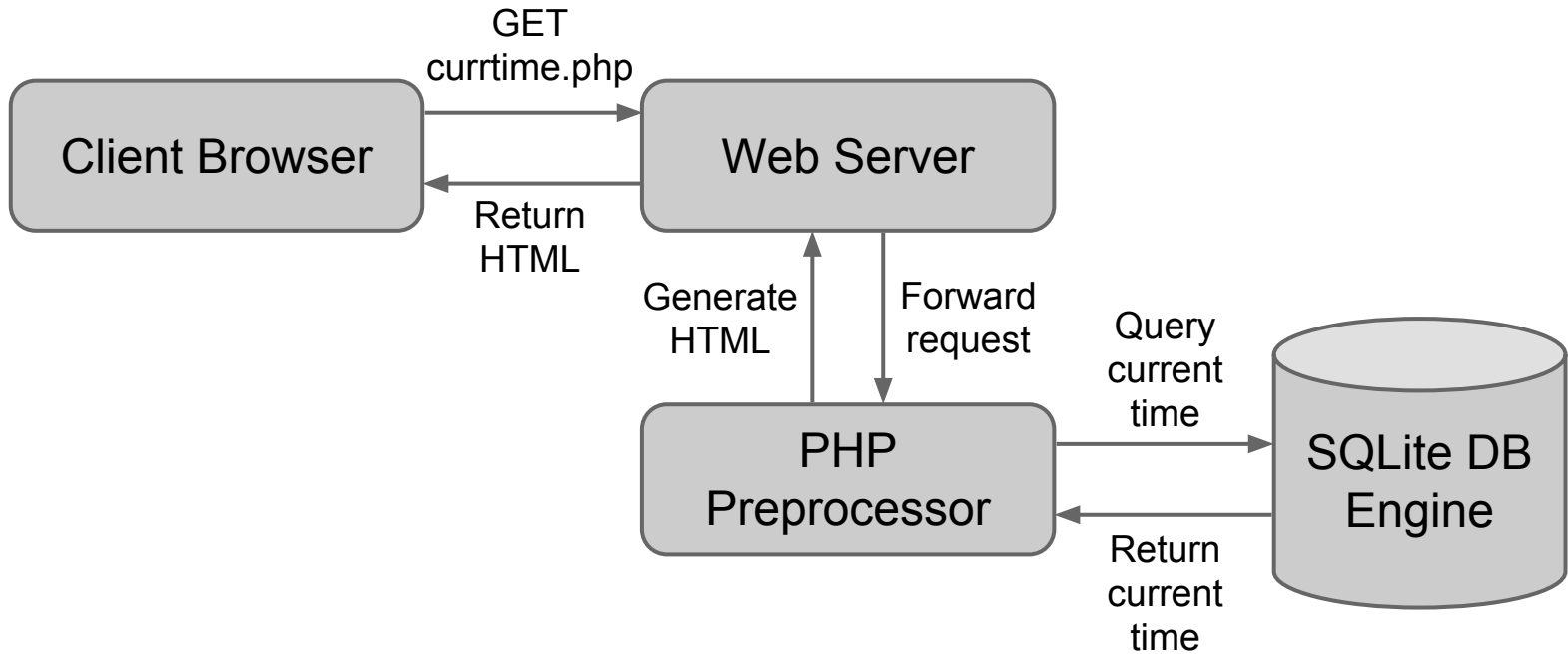
A Sample DB Query

Change "current time".

```
include ('./sqlitedb.php');
```

```
try {
  $statement = $db->prepare('update Time set currentTime =
                            :selectedtime');
  $statement->execute(array(':selectedtime' => $selectedtime));
} catch (PDOException $exception) {
  echo "PDO Exception: " . $exception->getMessage();
}
```

A Sample Transaction

Change bidder IDs of all bids to the specified name.

```php
try {
  $db->beginTransaction();
  $st1 = $db->prepare("select 1 from User where userId = :name");
  $st1->execute(array(":name" => $entername));
  if(!$st1->fetch())
    throw new Exception("Bidder user identifier doesn't exist.");
  $st2 = $db->prepare("update Bid set bidderId = :name");
  $st2->execute(array(":name" => $entername));
  $db->commit();
} catch (PDOException $exception) {
  $db->rollBack();
  echo "PDO Exception: " . $exception->getMessage();
}
```

Retrieving Results

```
$st = $database->prepare("select * from Item where
                          buyPrice < :balance");
$st->execute(array(":balance" => $balance));

while ($item = $st->fetch(PDO::FETCH_OBJ)) {
  echo $item->itemId;
  echo $item->itemName;
  ...
}
```

Next Steps

- Create index.html
- Implement:
  - Listing of auctions.
  - Search criteria.
  - Item display.
  - Bidding.
  - Other required functionality.

web.py

- Tour of the starter code.
- Debugging in web.py
- Composing templates.
- Transactions in web.py

PHP vs. web.py

- Pros for PHP
  - Learning curve: easier to pick up.
  - Very stable codebase, been used for many years.
- Pros for web.py
  - Simpler and cleaner syntax.
  - Good introduction into more advanced web application development.

Extra Functionality

- An endless list
  - Build snazzy UI.
  - Add user authentication.
  - Put new items up for bidding.
  - Display bidding statistics.
  - …
- Don't break required functionality!

Tips

- Start early!
- Read the assignment text carefully.
- Finish required functionality before extras.
- Keep a backup copy of your DB handy.
- Make sure triggers have been created on DB.
- Create multiple folders in cgi-bin to run different versions simultaneously.
- Submit all files required to run the site, including your DB.