

Servlet/JSP Exercise

This exercise objective on using Servlet/JSP including with JDBC connect database and manipulate data with CRUD.

Table schema

```
CREATE TABLE ttransaction (
    transid VARCHAR(50) NOT NULL COMMENT 'UUID',
    userid VARCHAR(50) NOT NULL COMMENT 'tuser.userid',
    transdate DATE NOT NULL,
    journalid VARCHAR(50) NOT NULL COMMENT 'tjournal.journalid',
    transno INT(11) NOT NULL COMMENT 'sequence number',
    amount DECIMAL(20,4) NOT NULL,
    remark VARCHAR(200) NULL DEFAULT NULL,
    transtime DATETIME NULL DEFAULT NULL,
    editdate DATE NULL DEFAULT NULL,
    edittime TIME NULL DEFAULT NULL,
    PRIMARY KEY (transid),
    UNIQUE INDEX userid_trxdate_journalid (userid, transdate, journalid)
);

CREATE TABLE tjournal (
    journalid VARCHAR(50) NOT NULL COMMENT 'UUID',
    journalname VARCHAR(100) NOT NULL,
    journaltype VARCHAR(1) NOT NULL DEFAULT '0' COMMENT
    '0=Payment,1=Receive',
    amount DECIMAL(20,4) NOT NULL DEFAULT '0.0000',
    editdate DATE NULL DEFAULT NULL,
    edittime TIME NULL DEFAULT NULL,
    PRIMARY KEY (journalid)
);
```

Specification

1. Create HTML & Java Script with AJAX to handle GUI like below

The screenshot shows a web browser window with a single tab titled 'Transaction'. The address bar displays 'localhost:8080/JSP...'. The form contains the following elements:

- A dropdown menu labeled 'Transaction' with 'Breakfast' selected, circled with a red '1'.
- A text input field labeled 'Amount', circled with a red '2'.
- A text input field labeled 'Remark', circled with a red '3'.
- An 'Insert' button located below the 'Remark' field.

Example : screen insert

- Transaction come from table tjournal with option value = tjournal.journalid and caption = tjournal.journalname
- Try to default Amount with tjournal.amount after selection changed

2. CRUD

- create : try to insert new record with input
 - transid = UUID if not specified
 - transdate = current date if not specified
 - userid = 'tester'
 - journalid = Transaction from 1
 - transno = 1
 - amount = Amount from 2
 - remark = Remark from 3
 - transtime = current timestamp
 - editdate = current date
 - edittime = current time

b. retrieve : with query statement

```
select ttransaction.*,tjournal.journalname  
from ttransaction,tjournal  
where ttransaction.transid = ?  
and ttransaction.journalid = tjournal.journalid
```

c. update : with query statement

```
update ttransaction set amount=?, remark=? where transid=?
```

- i. transid = from retrieve
- ii. amount = from input
- iii. remark = from input
- iv. editdate = current date
- v. edittime = current time

d. delete : with query statement

```
delete from ttransaction where transid=?
```

- i. transid = from retrieve