Project Design

CMSC 495 6380

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Group 5

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**Revision History**

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| --- | --- | --- |
| **Date** | **Name** | **Description** |
| 6/13 | Summer | Created document with cover page, revision history table, and outline.  Initial pseudocode for interest accrual subsystem. |
| 6/14 | Summer | Create event trace diagram for interest accrual subsyem |

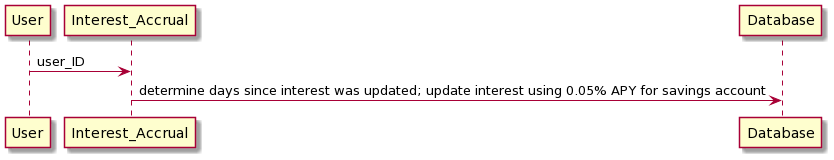
**Event Trace Diagram**

*Scenario 1:*

Description: the user logs in and the interest accrual system updates the interest value if it hasn’t been updated that day.

Pre-Condition: user is logged in.

Post-Condition: interest value is updated to reflect total interest (as of today).



**Class Design**

1. Authentication Subsystems
2. Transaction Subsystems
3. Interest Accrual Subsystem

Class Interest {

database.connect() //standard library database API

APY = .005

APD = APY/365

Void interest(user\_ID){

delta = date.today() – database.fetchall(user\_ID)[“last\_updated”]

if delta.days > 0{

collect\_interest = (APD \* delta.days) \* database.fetchall(user\_ID)[“savings”]

new\_interest = database.fetchall(user\_ID)[“interest”] + collect\_interest

database.execute(user\_ID, interest = new\_interest, last\_updated = date.today()) //standard library database API

log(IP, user\_ID, time, “interest updated”)

database.commit() //standard library database API

}

database.close() //standard library database API

return

}

**Risk and Risk Mitigation**