

Software Engineering Principle and Practices

Lab-8

Batch - **A4**

Group no. **9**

Team members:

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- **CE079** Dobariya Vrund g.

Title: College management system

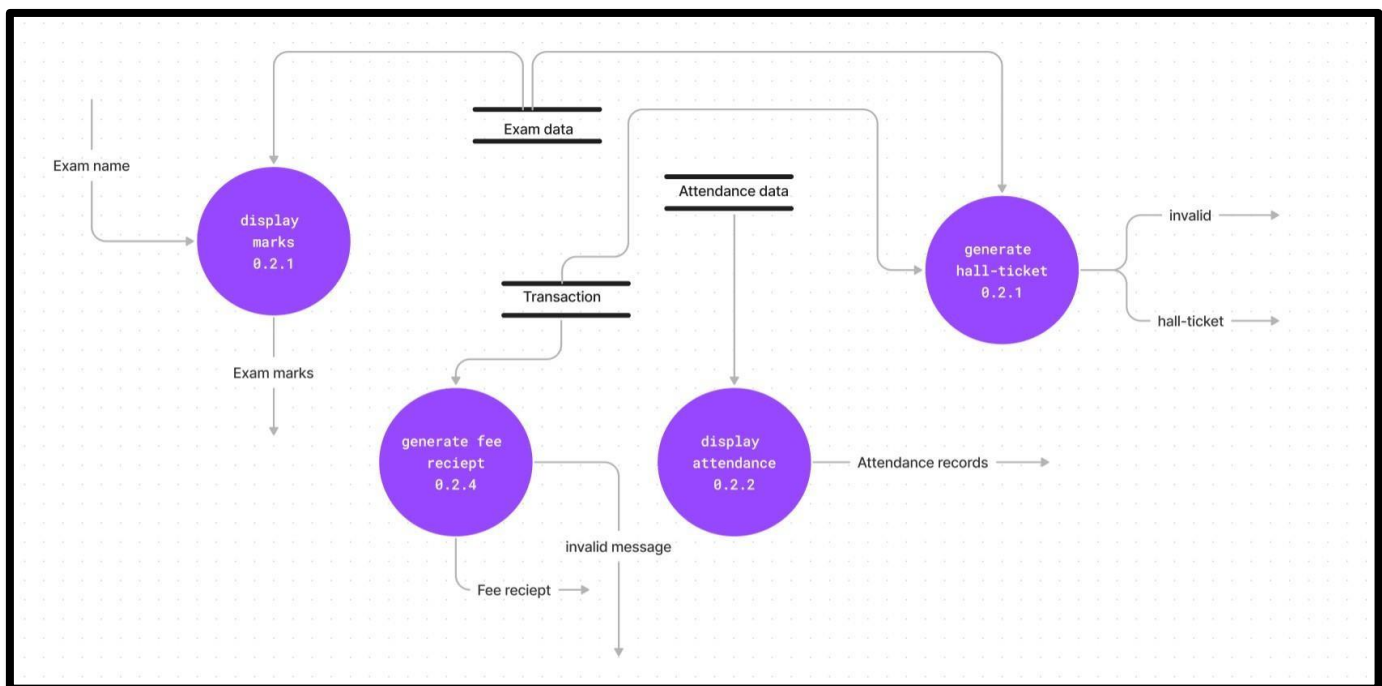
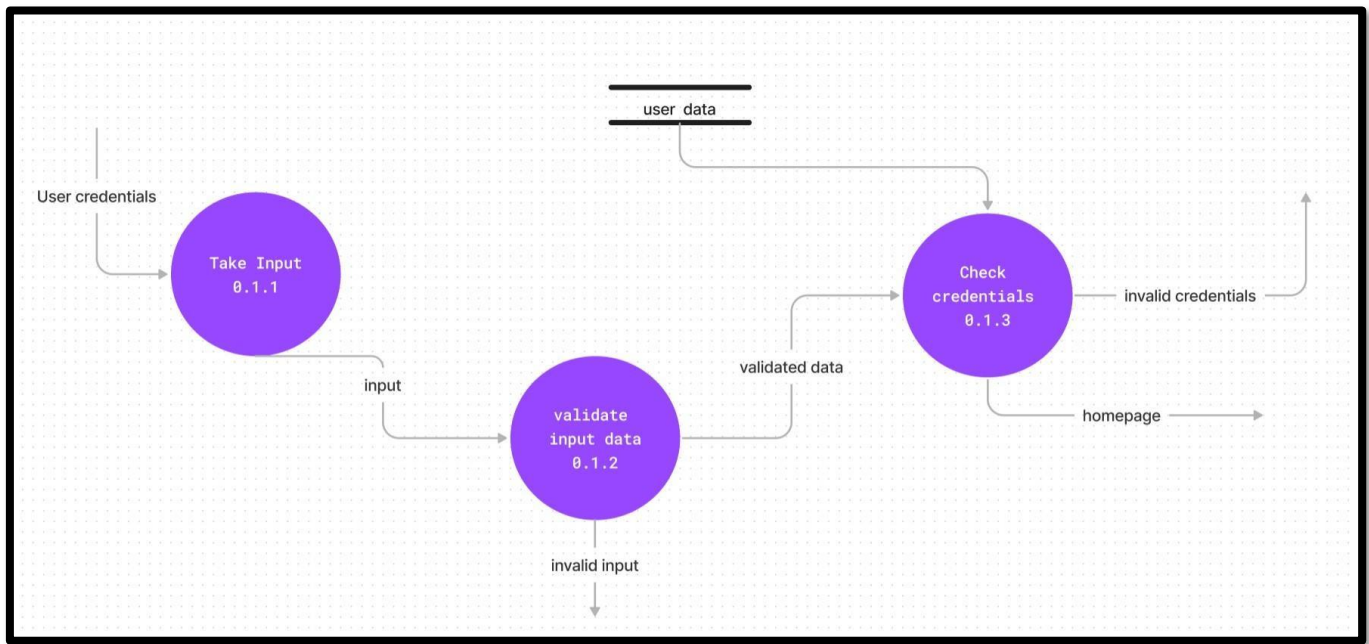
```
graph TD; Staff[Staff] -- "task-related data" --> System((college management system 0)); System -- "response data" --> Student[Student]; Student -- "task related data" --> System; Admin[Admin] -- "request data" --> System; System -- "display" --> Staff; System -- "response" --> Admin;
```

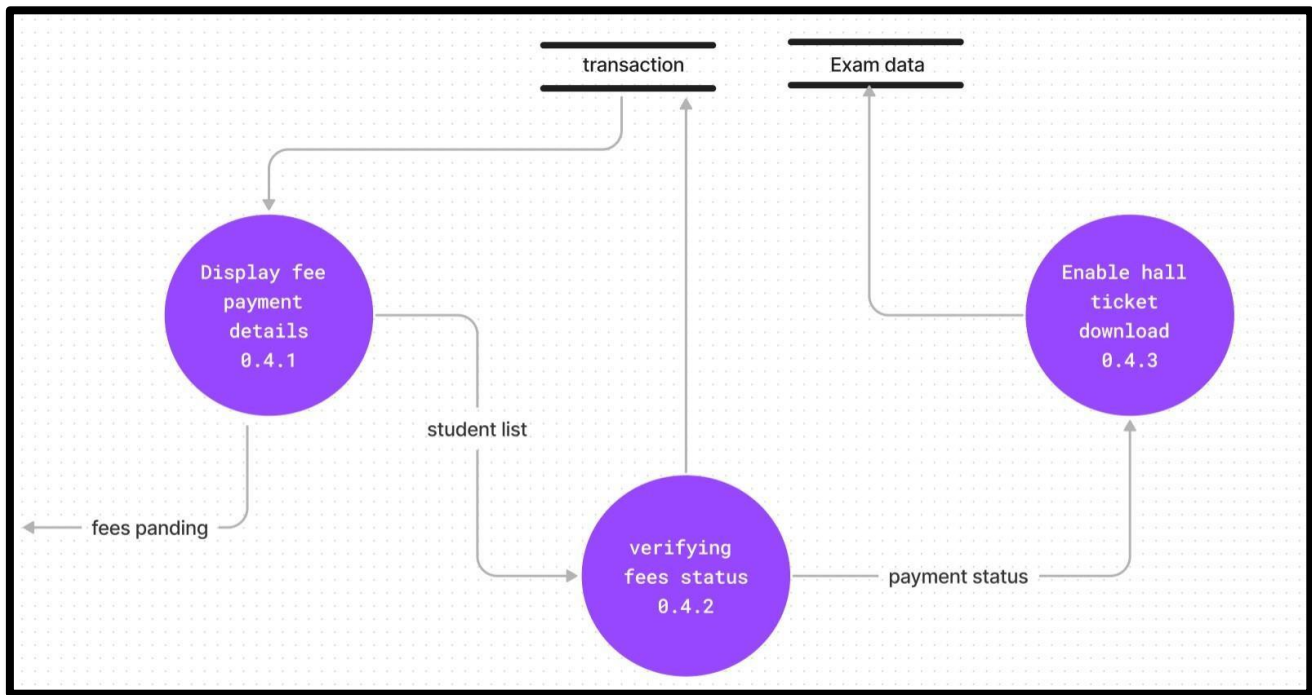
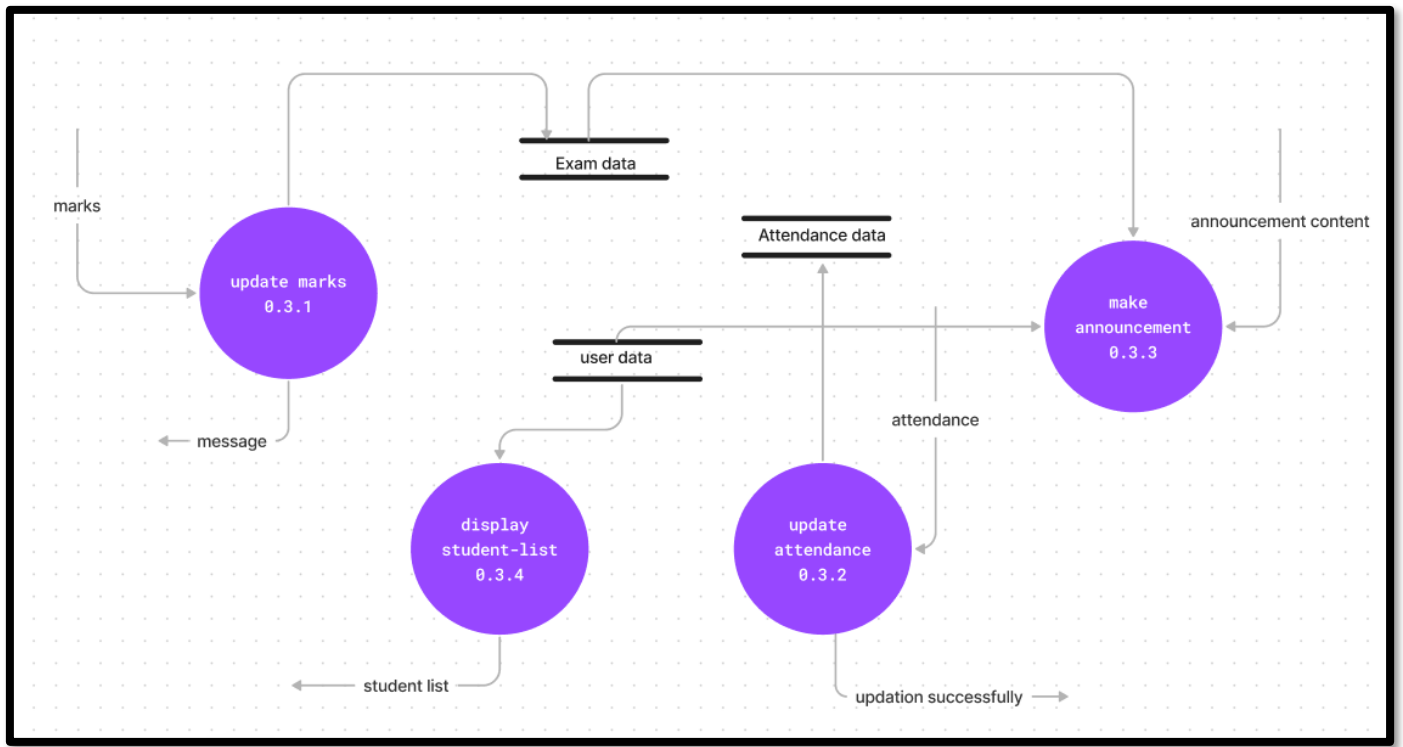
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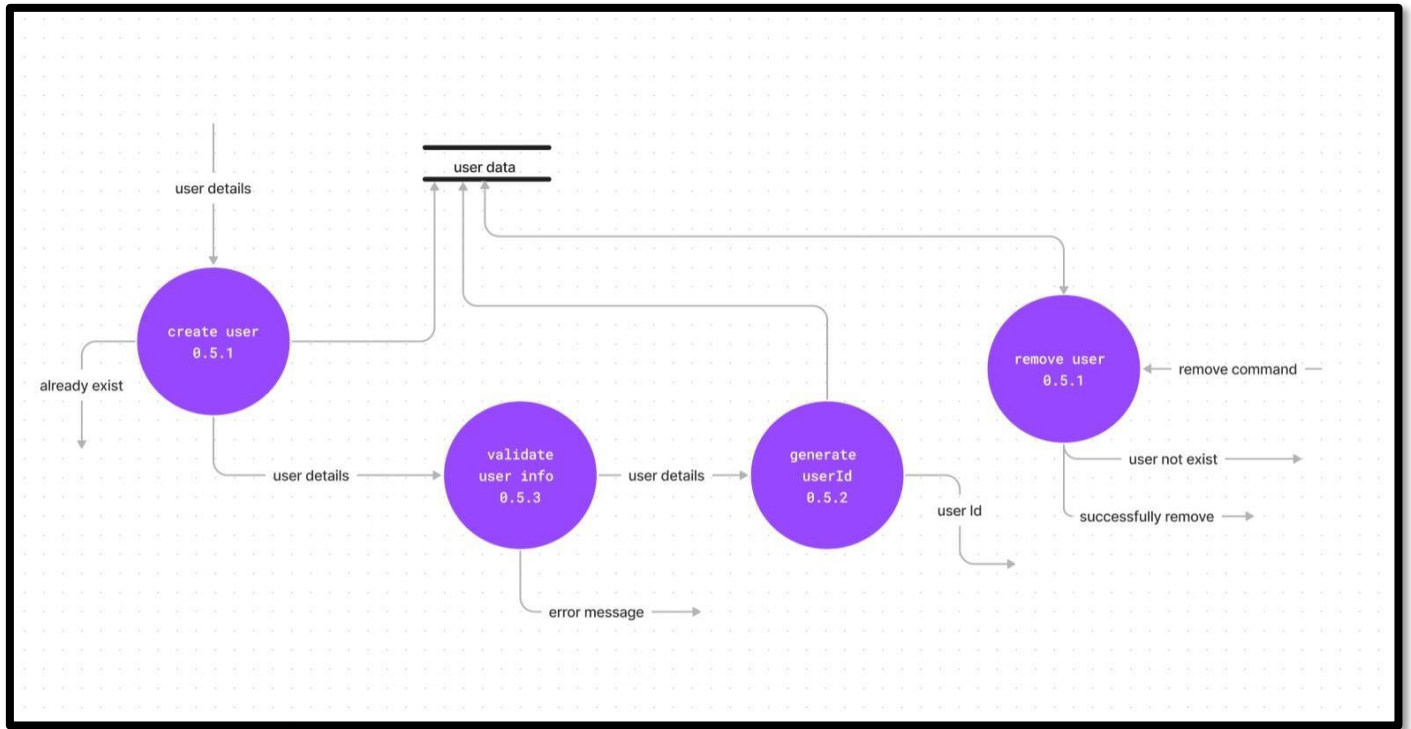
graph TD
    UC((Authenticating user  
0.1))
    CRU((creating and removing users  
0.4))
    MST((managing student's tasks  
0.2))
    MERD((managing exam relate data  
0.6))

    UC -- "User credentials" --> UC
    UC --> MST
    CRU -- "user's data" --> CRU
    CRU --> MST
    MST -- "academic data" --> AD[ ]
    MST <--> |"user data"| UD[ ]
    MST <--> |"Exam data"| ED[ ]
    MST --> MERD
    MERD -- "exam related data" --> ERD[ ]
    ERD --> MST
    MERD -- "message" --> M[ ]
    MST -- "task related request" --> TRR[ ]
    TRR --> MST
  
```

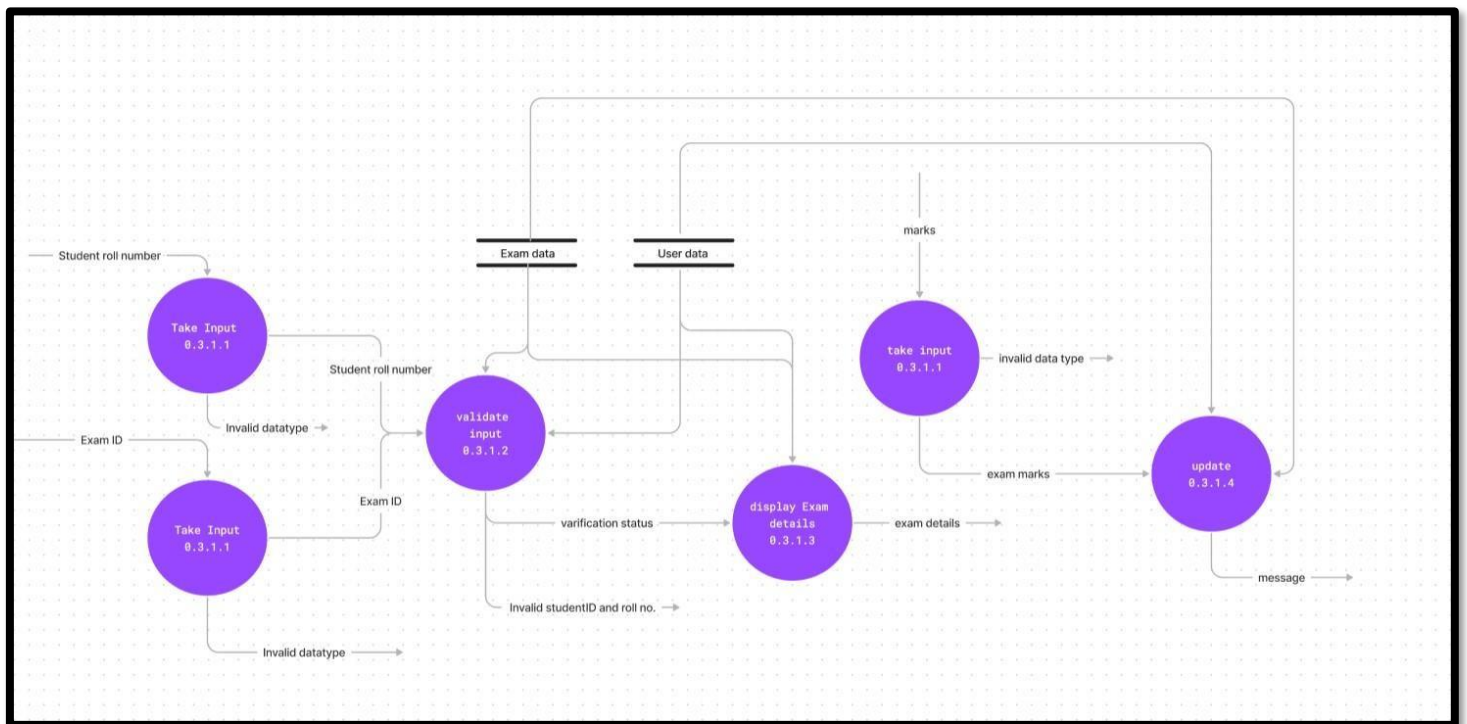
Level-2 DFD:

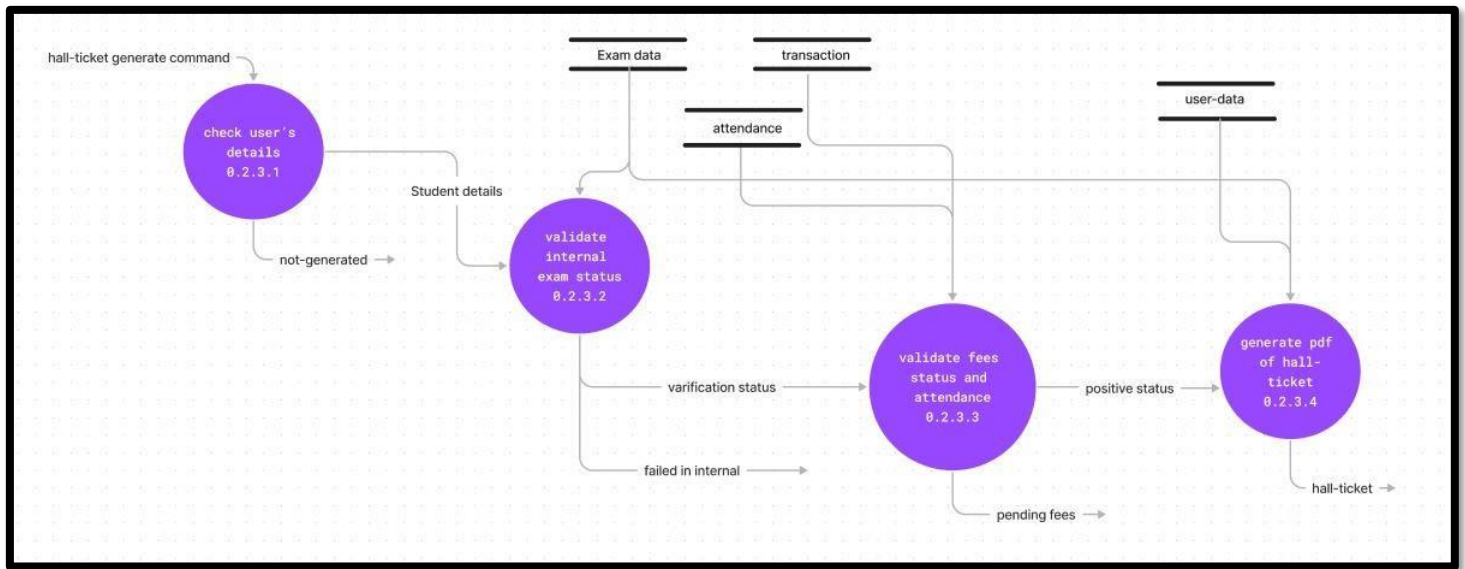






Level-3 DFD:





Data dictionary for the DFD model:-

task related data: command

response data: [academic data,message,]

academic data: [hall-ticket,exam marks,fees receipt,attendance records]

hall-ticket: roll#+date+subjects+room#+name+branch+semester

roll#:integer

date: date

subject: string

room#: integer

name: string

branch: string

semester: integer

exam marks:obtain mark+total marks+subject

obtain marks: integer

total marks: integer

message: [invalid input,invalid credentials,updatation successfully,fees

panding,error,successfully remove,user not exist,invalid student id and roll no.,invalid data type,not generated,failed in internal]

user's data: [name+birthdate+gender+mobile#,blood-group+email-id]

birthdate: date

gender:choice

mobile#: {integer}10

blood-group: string

email-id: string

user credentials: id+password

id: string

password: password

homepage: html page

exam related data: exam name + exam-paper + exam type
exam-paper: subject+que+marks
que: string
exam-type: choice
exam-name: string
fees receipt: name+semester+fees+bank name+payment-type+date
fees:-academic-fees+exam-fees+total-fees
academic-fees: integer
exam fees: integer
total fees: integer
payment-type:choice
attendance records: total-days+present-day+overall percentage
total-days: days
presentdays: days
percentage: float
studentlist: studentname + roll#+div
div: char
announcement content: title+description+attachment
title:string
description: string
attachment: file
remove-command: command
student roll#: integer
examid: integer
hall ticket generate command: command
verification status: string
positive status: string
payment status: string