Previous year question papers management system

REQUIREMENTS :

SOFTWARE REQUIREMENTS :

operating system : power point

programming language : c programming

compiler : c

HARDWARE REQUIREMENTS :

2GB RAM

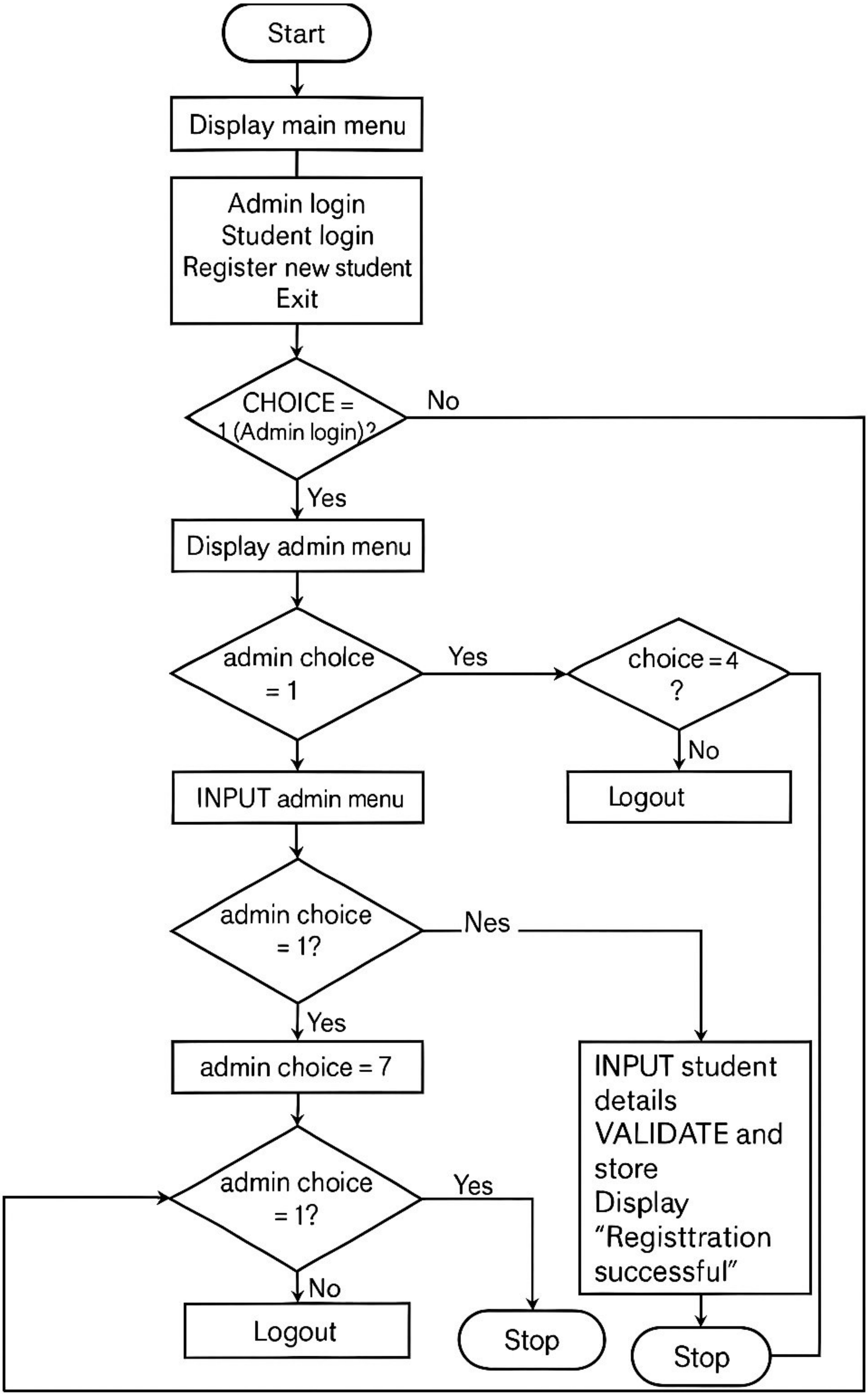
512 MB Storage

dual-core processor

INTRODUCTION:

The **Previous Year Question Paper Management System** is a smart digital platform designed to organize, store, and access question papers from past examinations in a fast and efficient way. In many educational institutions, students often struggle to find previous year papers due to improper storage, missing files, or unorganized records. This system solves that problem by providing a **centralized digital repository** where all question papers can be uploaded, categorized, and retrieved instantly.

FLOWCHART :


Start
Display main menu
Admin login
Student login
Register new student
Exit
CHOICE =
1 (Admin login)?
No
Yes
Display admin menu
admin cholce
= 1
Yes
choice = 4
?
No
INPUT admin menu
Logout
admin choice
= 1?
Nes
Yes
admin choice = 7
INPUT student
details
VALIDATE and
store
Display
"Registtration
successful"
admin choice
= 1?
Yes
No
Logout
Stop
Stop

MODULE :

1. user Authentication/Registration Module
2. Admin operation module
3. Student operations module
4. File handling module
5. Utility module

MODULE WISE LOGIC :

1. User Authentication/Registration Module :

MODULE PROGRAM :

1 .Main Module

1.1 main() – Logic Call load Data() to load existing data (question papers, students, downloads).

```
Repeat forever:
Call display Main Menu() to show main options.
Read user choice.
Switch on choice:
    1 → call admin Login().
    2 → call student Login().
    3 → call register New Student().
    4 →Print exit message .
```

Call save Data().

Exit the program.

Default → print “Invalid choice” and continue loop.

1.2 display Main Menu() – Logic

2. Print system title and decorative lines.

3. Print:

4. Admin Login

5. Student Login

6. Register New Student

7. Exit

8. 2. Admin Module

9. 2.1 admin Login() – Logic

10. Prompt admin to enter username.

11. Prompt admin to enter password.

12. Remove newline characters from both strings.

13. If username is "admin" and password is "admin123":

14. Print “Login Successful”.

15. Call admin Menu(username).

Else:

Print “Invalid Credentials”.

Return to main menu.

2.2 admin Menu(char *admin Username) – Logic

Repeat until admin chooses logout:

Display admin menu with options:

Upload Question Paper

16. Delete Question Paper

17. Update Question Paper

18. View All Question Papers

19. Manage Categories/Subjects

20. View Download Statistics

21. Logout

22. Read admin choice.

Switch on choice:

23. 1 → upload Question Paper()

24. 2 → delete Question Paper()

25. 3 → update Question Paper()

26. 4 → view All Question Papers()

27. 5 → manage Categories()

28. 6 → view Download Statistics()

29. 7 → print “Logging out...” and return.

30. Default → print “Invalid choice”.

31.3. Question Paper Management Module

32. 3.1 upload Question Paper() – Logic

33. Declare a new Question

34. Prompt admin to enter:

35. > Subject
36. > Year
37. > Semester
38. > Exam type (Mid/Final/Model)
39. > Department
40. > Regulation
41. > PDF filename

42. Check if filename contains “.pdf”:
43. If not, print “Invalid file format” and return.
44. Call generate Paper ID(new Paper . paper ID) to generate unique ID.
45. Set new Paper . download Count = 0.
46. Store new Paper in papers[paper Count].
47. Increment paper Count.
48. Print upload success message and generated Paper ID.
49. Call save Data().

50.3.2 delete Question Paper() – Logic

51. If paper Count == 0:
52. Print “No question papers available”.
53. Return.
54. Call view All Question Papers() to show list.
55. Prompt admin to enter paper ID to delete.
56. Search in papers[]:
57. If found, store index in found . If not found, print “Paper ID not found” and return .
58. Ask admin for confirmation (y/n).
59. If confirmed:
60. Shift elements from found + 1 to end one position left.
61. Decrement paper Count.
62. Print “Deletion successful”.
63. all save Data().
64. Else:
65. Print “Deletion cancelled”

66.3.3 update Question Paper() – Logic

67. If paper Count == 0:
68. Print “No question papers available”.
69. Return.
70. Call view All Question Papers().
71. Prompt admin to enter paper ID to update.
72. Search in papers[]:
73. If not found, print “Paper ID not found” and return.
74. Display current details of that paper.
75. Prompt admin to enter new values:

76. New subject name

77. New year

78. New semester

79. Update these fields in the selected papers[found].

80. Print “Update successful

81. Call save Data().

82.3.4 view All Question Papers() – Logic

83. Print heading “All Question Papers”.

84. If paper Count == 0:

85. Print “No question papers available”.

86. Return.

87. Print table header (Paper ID, Subject, Year, Semester, Department).

88. For i = 0 to paper Count - 1:

89. Print details of papers[i].

90.3.5 manage Categories() – Logic

91. Display menu:

92. Add Subject

93. Delete Subject

94. Add Department

95. Delete Department

96. Back

97. Read choice.

98.Switch on choice:

99. 1 → print “Subject management feature (to be implemented)”.

100. 2 → print “Subject deletion feature (to be implemented)”.

101. 3 → print “Department management feature (to be implemented)”.

102. 3 → print “Department management feature (to be implemented)”.

103. 4 → print “Department deletion feature (to be implemented)”.

104. 5 → return . Default → print “Invalid choice”.

105. 3.6 view Download Statistics() – Logic

106. Print heading “Download Statistics”.

107. If paper Count == 0:

108. Print “No question papers available”.

109. Return.

110. Print table header (Paper ID, Subject, Downloads).

111. For each paper:
112. Print Paper ID, Subject, and download Count.
113. Initialize max Downloads = 0, max Index = 0.
114. For each paper:
115. If papers[i].download Count > max Downloads:
116. Update max Downloads and max Index.
117. If max Downloads > 0:
118. Print the most downloaded paper subject and count.
119. 4. Student Module
120. 4.1 student Login() – Logic
121. Prompt user to enter roll number.
122. Prompt user to enter password.

1. Initialize found = -1.
2. Loop from i = 0 to student Count - 1:
3. If students[i].roll Number matches and students[i].password matches:
4. Set found = i and break.
5. If found != -1:
6. Print “Login successful” and greet with student name.
7. Call student Menu(roll Number).
8. Else:
9. Print “Invalid credentials”.
10. 4.2 register New Student() – Typical Logic
11. Prompt for student details : Roll number, name, department, semester, email, password.
12. Check that roll number is not already present.
13. Create a Student structure with entered data.
14. Store in students[student Count].
15. Increment student Count.
16. Call save Data().
17. 4.3 student Menu(char *roll Number) – Logic
18. Repeat until student logs out:
19. Display Student Menu:
20. Search Question Papers
21. Browse by Subject
22. Browse by Year

1. Browse by Department
2. View My Downloads
3. Download Question Paper
4. Logout
5. Read student choice.
6. Switch on choice:
7. 1 → search Question Papers (roll Number)
8. 2 → browse By Subject(roll Number)
9. 3 → browse By Year(roll Number)
10. 4 → browse By Department(roll Number)
11. 5 → view My Downloads(roll Number)
12. 6 → download Question Paper(roll Number)
13. 7 → print “Logging out...” and return.
14. Default → print “Invalid choice”.
15. 5. Search and Browse Module
16. 5.1 search Question Papers(char *roll Number) – Logic
17. Prompt for search criteria:
18. Keyword (can be part of subject, optional)
19. Subject (exact, optional)
20. Year (0 to skip)
21. Semester (optional)
22. Department (optional)
23. Initialize found = 0.
24. For each paper:
25. Assume match = 1.
26. If keyword is not empty and subject does not contain keyword → match = 0.
27. If subject is not empty and unequal → match = 0.
28. If year > 0 and not equal → match = 0.
29. If semester is not empty and unequal → match = 0.
30. If department is not empty and unequal → match = 0.
31. If match == 1:
32. Print details of that paper.
33. Increment found.
34. After loop:

35.If found == 0: print “No matching results found”.

36.Else: print total number of results.

37.5.2 browse By Subject(char *roll Number) – Logic

38. If paper Count == 0:

39. Print “No question papers available”.

40. Return.

41. Build a list of unique subjects:

42. For each paper, check if its subject already exists in subjects[].

43. If not, add it and increment subject Count. Display all subjects with numbers (1 to subjectCount).

44. Prompt user to select subject number.

45. If invalid number : Print “Invalid choice” and return.

46. Else, for each paper:

47. If paper’s subject matches selected subject:

48. Print Paper ID, Year, Semester, etc.

49.5.3 browse By Year(char *roll Number) – Logic

50. If paper Count == 0:

51. Print “No question papers available”.

52. Return.

53. Build a list of unique years:

54. For each paper, if its year is not already in years[], add it.

55. Display all years with numbers.

56. Prompt user to select year number.

57. If invalid: Print “Invalid choice” and return.

58. Else, for each paper:

59. If paper’s year equals selected year:

60. Print Paper ID, Subject, Semester, etc.

61.5.4 browse By Department(char *roll Number) – Logic

62. If paper Count == 0:

63. Print “No question papers available”.

64. Return . Build a list of unique departments:

65. For each paper, if department not already in departments[], add it.

66. Display departments with numbers.

67. Prompt user to select department number.

68. If invalid:

69. Print “Invalid choice” and return.

70. Else, for each paper:

71. If paper’s department matches selected one:

72. Print Paper ID, Subject, Year, Semester.

73.6. Download and History Module

74.6.1 download Question Paper(char *roll Number) – Logic

75. Prompt student to enter Paper ID to download (optionally after showing/searching list).

76. Search for this Paper ID in papers[]:

77. If not found, print “Paper ID not found” and return.

78. If found : Increment papers[index].download Count.

79. Create a new Download History record:

80. Roll Number = given roll number.

81. Paper ID = selected paper ID.

82. Download Date = current date string from get Current Date().

83. Store it in downloads[download Count]. Increment download Count.

84. Print a message simulating successful download, with filename.

85. Call save Data().

86.6.2 view My Downloads(char *roll Number) – Logic
87.Print heading “My Downloads”.
88. Initialize found = 0.
89. Loop through all entries in downloads[]:
90. If downloads[i].roll Number equals given roll Number:
91. Print Paper ID and Download Date.
92. Optionally, look up subject from papers[].
93. Increment found . If found == 0:
94. Print “You have not downloaded any papers yet”.
95.7. Utility and Data Handling Module
96.7.1 clear Input Buffer() – Logic
97. Loop : Read a character using get char().
98. If character is newline '\n' or EOF, break loop.
99. Used after scanf to remove leftover newline characters.
100. 7.2 generate Paper ID(char *id) – Typical Logic
101. Use current paper Count + 1 as numeric part.
102. Format paper ID string, e.g. "P001", "P002", etc.
103. Store formatted ID into id using sprint
104. 7.3 get Current Date(char *date) – Typical Logic
1. Get current system time using time() and local time().
2. Format it into a readable string using strftime,
3. e.g. "dd-mm-yyyy hh: mm: ss".
4. Store formatted string in date.
5. 7.4 load Data() – Logic
6. Open data files (for papers, students, downloads) if they exist.
7. Read counts (paper Count, student Count, download Count).
8. Read corresponding arrays (papers[], students[], downloads[]).
9. If files do not exist, initialize counts to 0.Close all files.
10.7.5 save Data() – Logic
11. Open data files for writing.
12. Write paper Count and all papers[] to file.
13. Write student Count and all students[].
14. Write download Count and all downloads[].
15. Closeallfiles.

OUTPUT :

```
========================================
  QUESTION PAPERS MANAGEMENT SYSTEM
========================================
1. Admin Login
2. Student Login
3. Register New Student
4. Exit
========================================
Enter your choice:1
--- ADMIN LOGIN ---
Enter username: admin
Enter password: admin123
? Login Successful!
========================================
  ADMIN MENU (Logged in as: admin)
========================================
1. Upload Question Paper
2. Delete Question Paper
3. Update Question Paper
4. View All Question Papers
5. Manage Categories/Subjects
6. View Download Statistics
7. Logout
```

```
=========================================
Enter your choice:1
--- UPLOAD QUESTION PAPER ---
Enter Subject Name: maths
Enter Year: 2025
Enter Semester: 1
Enter Exam Type (Mid/Final/Model): mid
Enter Department: civil
Enter Regulation: 1
Enter PDF filename: maths.pdf
? Upload Successful!
Paper ID: QP1002
=========================================
  ADMIN MENU (Logged in as: admin)
=========================================
1. Upload Question Paper
2. Delete Question Paper
3. Update Question Paper
4. View All Question Papers
5. Manage Categories/Subjects
6. View Download Statistics
7. Logout
=========================================
Enter your choice: 2
--- DELETE QUESTION PAPER ---
=========================================
  ALL QUESTION PAPERS
==========================================
Paper ID   Subject           Year    Semester    Department
--------------------------------------------------------------------
QP1001     MATHS              2024     1          CIVIL
QP1002     maths             2025     1          civil
Enter Paper ID to delete: QP1001
Are you sure you want to delete this paper? (y/n): Y
? Deletion Success
==========================================
  ADMIN MENU (Logged in as: admin)
==========================================
1. Upload Question Paper
2. Delete Question Paper
3. Update Question Paper
4. View All Question Papers
5. Manage Categories/Subjects
6. View Download Statistics
7. Logout
==========================================
Enter your choice: 3
--- UPDATE QUESTION PAPER ---
==========================================
  ALL QUESTION PAPERS
==========================================
Paper ID   Subject           Year    Semester    Department
--------------------------------------------------------------------
QP1002     maths             2025     1          civil
Enter Paper ID to update: QP1002
--- Current Details ---
Subject: maths
Year: 2025
Semester: 1
Department: civil
--- Enter New Details ---
```

```
Enter new Subject Name: PHYSICS
Enter new Year: 2025
Enter new Semester: 1
? Update Successful!
==========================================
  ADMIN MENU (Logged in as: admin)
==========================================
1. Upload Question Paper
2. Delete Question Paper
3. Update Question Paper
4. View All Question Papers
5. Manage Categories/Subject
6. View Download Statistics
7. Logout
==========================================
Enter your choice:
==========================================
  ALL QUESTION PAPERS
==========================================
Paper ID   Subject          Year    Semester    Department
----------------------------------------------------------------------
QP1002     PHYSICS          2025    1           civil
==========================================
  ADMIN MENU (Logged in as: admin)
==========================================
1. Upload Question Paper
2. Delete Question Paper
3. Update Question Paper
4. View All Question Papers
5. Manage Categories/Subjects
6. View Download Statistics7. Logout
==========================================
Enter your choice:5
--- MANAGE CATEGORIES ---
1. Add Subject
```

```
2. Delete Subject
3. Add Department
4. Delete Department
5. Back
Enter your choice: 1
Subject management feature (to be implemented)
========================================
  ADMIN MENU (Logged in as: admin)
========================================
1. Upload Question Paper
2. Delete Question Paper
3. Update Question Paper
4. View All Question Papers
5. Manage Categories/Subjects
6. View Download Statistics
7. Logout
========================================
Enter your choice: 6
========================================
  DOWNLOAD STATISTICS
========================================
Paper ID   Subject                   Downloads
-------------------------------------------------------
QP1002     PHYSICS                   0
========================================
  ADMIN MENU (Logged in as: admin)
========================================
1. Upload Question Paper
2. Delete Question Paper
3. Update Question Paper
4. View All Question Papers
5. Manage Categories/Subjects
6. View Download Statistics
7. Logout
========================================
Enter your choice: 7
Logging out...
==========================================
  QUESTION PAPERS MANAGEMENT SYSTEM
==========================================
1. Admin Login
2. Student Login
3. Register New Student
4. Exit
==========================================
Enter your choice: 2
--- STUDENT LOGIN --
Enter student roll number : 25A31A0125
Enter student password : js@@12js
STUDENT LOGIN SUCCESFUL
===========================================
QUESTION PAPERS MANAGEMENT SYSTEM
===========================================
1. Admin login
2. student login
3. student registration
4. Exit
===========================================
Enter your choice: 3
--- REGISTER NEW STUDENT ---
Enter Name: jaya sri
Enter Roll Number: newstudent.rollnumber
Enter Department: Enter Semester: civil 1
Enter Email: jayasri2259@gmail.com
Enter Password: js12@@js
? Registration Successful!
You can now login with your roll number and password.
==========================================
  QUESTION PAPERS MANAGEMENT SYSTEM
==========================================
1. Admin Login
2. Student Login
3. Register New Student
4. Exit
========================================
Enter your choice:
Enter your choice: 4
Thank you for using Question Papers Management System!
--------------------------------
Process exited after 2708 seconds with return value 0
Press any key to continue . . .
```

CONCLUSION :

The Previous Year Question Papers Management System successfully provides a simple, fast, and efficient way to store, manage, and retrieve question papers using basic C programming concepts. By integrating modules such as data input, file reading, storage, and searching, the system ensures that users can easily upload question papers and access them whenever required . This project demonstrates the practical use of arrays, strings, functions, file handling, and menu-driven programming. It reduces manual effort, eliminates the risk of misplaced papers, and saves time by providing quick search results based on date, subject, and exam type.

Overall, the system achieves its goal of creating an organized digital repository for previous year question papers and can be further improved by adding features like editing, deleting, or storing data in external databases.

THANK YOU