LATEX CODE

\documentclass{article}

\begin{document}

\section*{Objective: Student Registration Management System}

The objective of this code is to create a Student Registration Management System with the following features:

\textbf{User Interaction:}

The code interacts with the user by presenting a menu that allows them to perform various actions related to student records, such as creating, searching, displaying, modifying, and deleting records.

\textbf{Data Management:}

It manages student data using a student class, which encapsulates the attributes and behaviors of a student record, such as roll number, name, marks in different subjects, average, and grade.

\textbf{File Handling:}

The code uses file input/output to store and retrieve student records. It can read and write student records to a binary file named "student.dat."

\textbf{Record Operations:}
\begin{itemize}
    \item Create Student Record: Users can create a new student record by entering student details and have it written to the data file.
    \item Search Student Record: Users can search for and display a specific student record based on the roll number.
    \item Display All Records: Users can view all existing student records stored in the data file.
    \item Modify Student Record: Users can update the details of a specific student record based on the roll number.
    \item Delete Student Record: Users can delete a specific student record based on the roll number.

\end{itemize}

\textbf{Data Calculation:}

The code calculates the average marks and assigns a grade to each student based on their performance.

\textbf{User-Friendly Interface:}

The code provides clear and structured menus and prompts for user interaction, making it user-friendly.

\textbf{Data Validation:}

It assumes that all marks should be out of 100, ensuring some level of data validation.

\textbf{Exit Mechanism:}

The code allows users to exit the program with a "Thank you!" message.

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\section*{Welcome to Student Registration Management System}

\textbf{MENU}

\begin{enumerate}

\item Create a new student record

\item Search student record

\item Display all students records

\item Delete student record

\item Modify student record

\item Exit

\end{enumerate}

Enter your choice: 1

\section*{Create a new student record}

Enter student's roll number: 101

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Enter student's name: Rashi

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Enter Student's Marks

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All marks should be out of 100

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Enter marks in English: 45

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Enter marks in Math: 59

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Enter marks in Science: 66

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Enter marks in Second language: 78

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Enter marks in Computer science: 89

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Student's record has been created

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Enter your choice: 2

\section*{Search student record}

Enter the roll number: 102

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Roll number of student: 102

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Name of student: Digyansha

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English: 89

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Maths: 66

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Science: 56

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Second Language: 100

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Computer Science: 100

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Average Marks: 82

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Grade of student is: B

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Enter your choice: 3

\section*{Displaying All Records}

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Roll number of student: 101

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Name of student: Ayushi

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English: 100

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Maths: 98

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Science: 98

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Second Language: 89

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Computer Science: 100

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Average Marks: 97

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Grade of student is: A

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Roll number of student: 102

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Name of student: Digyansha

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English: 89

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Maths: 66

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Science: 56

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Second Language: 100

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Computer Science: 100

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Average Marks: 82

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Grade of student is: B

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Roll number of student: 103

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Name of student: Vaidehi

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English: 99

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Maths: 74

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Science: 74

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Second Language: 91

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Computer Science: 93

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Average Marks: 86

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Grade of student is: B

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Enter your choice:4

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\section*{Delete student record}

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Enter the roll number: 111

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Record Deleted.

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Enter your choice: 5

\section*{Enter new student details}

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Enter The roll number: 102

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Enter student's roll number: 112

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Enter student's name: Digyansha

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\textbf{Enter Student's Marks}

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All marks should be out of 100

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Enter marks in English: 91

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Enter marks in Math: 66

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Enter marks in Science: 56

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Enter marks in Second language: 100

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Enter marks in Computer science: 90

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Record Updated.

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Enter your choice: 6

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\section*{Exiting, Thank you!}

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Process exited after 1397 seconds with return value 0

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Press any key to continue . . .

\end{document}