

Online Test Taking System

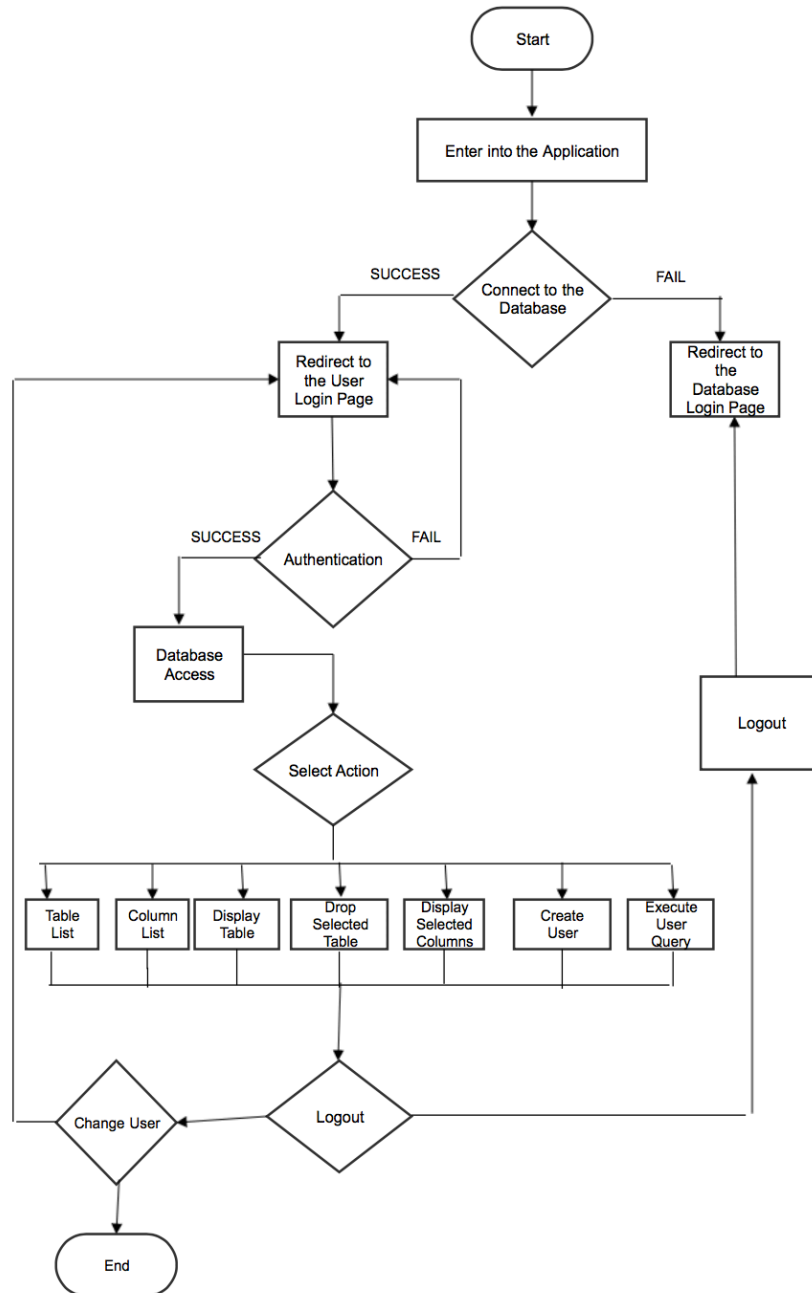
Programmer's Guide

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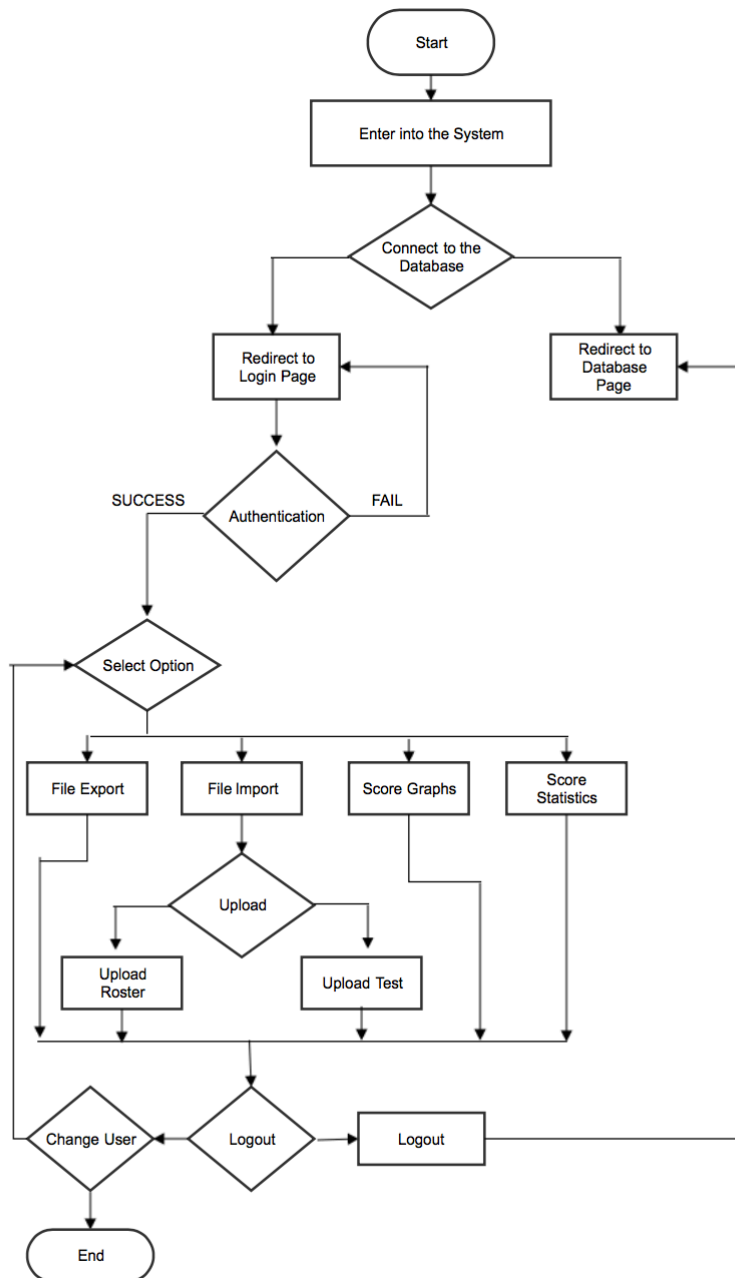
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Flow Diagrams:

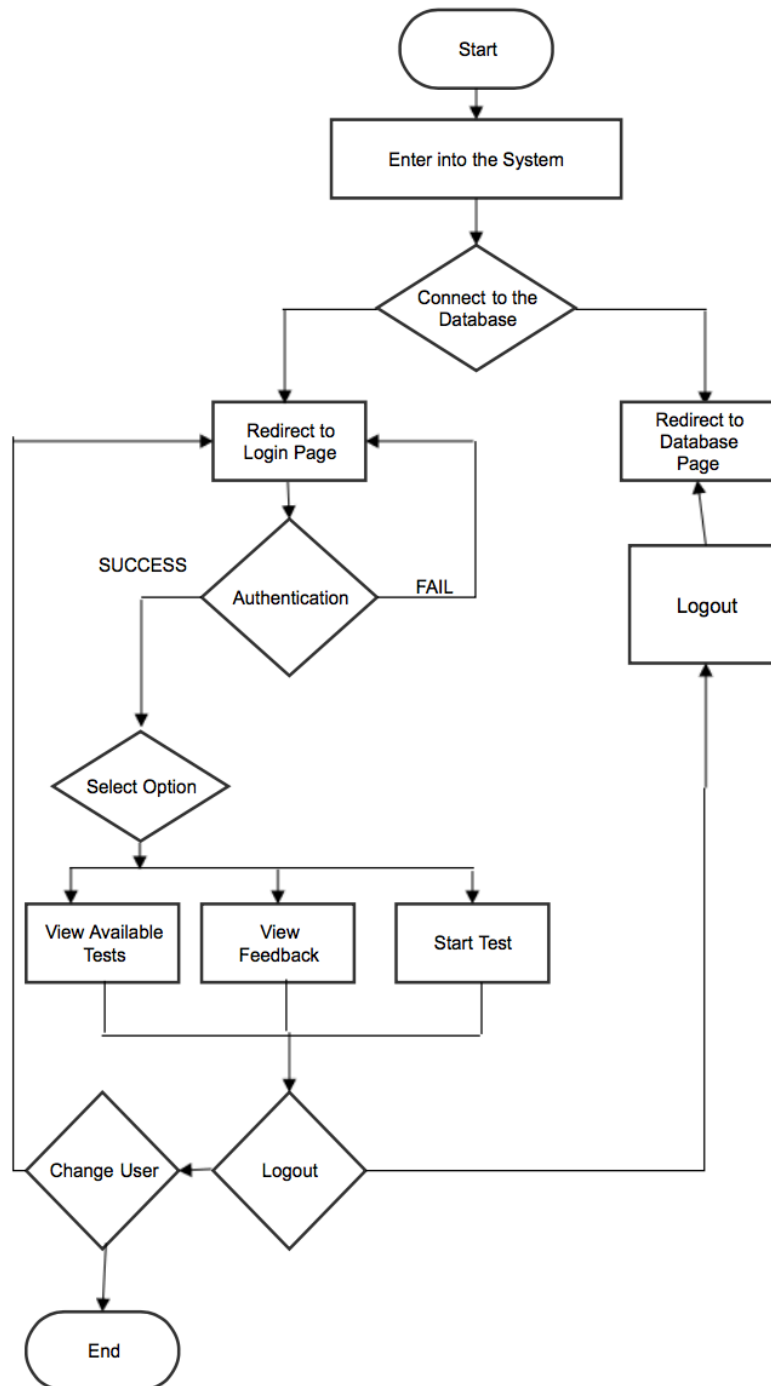
Admin:



Instructor:



Student:



Class Diagrams:

DbmsUserBean:

```
+ DbmsUserBean

- userName: String
- password: String
- dbms: String
- dbmsHost: String
- dbSchema: String
- jdbcDriver: String
- conURL: String
- status: String
- noOfColumns: int
- query: String
- rs: ResultSet
- stmt: Statement
- dbMetaData: DatabaseMetaData
- rsMetaData: ResultSetMetaData
- result: Result
- int user: int
- sData: Object[][]

+ closeDataBaseConnection(): void
+ convertToResult(): void
+ executeQuery(String): int
+ getColumns(String): List<String>
+ getCon(): Connection
+ getConURL(): String
+ getDatabaseConnection(): boolean
+ getDataList(): ArrayList
+ getDbMetaData(): DatabaseMetaData
+ getDbms(): String
+ getDbmsHost(): String
+ getDbSchema(): String
+ getJdbcDriver(): String
+ getNoOfColumns(): int
+ getObjectexecuteQuery(String): Object[][]
+ getPassword(): String
+ getQuery(): String
+ getResult(): Result
+ getResultList(): void
+ getRs(): ResultSet
+ getRsMetaData(): ResultSetMetaData
+ getData(): Object[][]
+ getStatus(): String
+ getStmt(): Statement
+ getTables(): List<String>
+ getUser(): int
+ getUserName(): String
+ setCon(Connection): void
+ setConURL(String): void
+ setDataList(ArrayList)
+ setDbMetaData(DatabaseMetaData): void
+ setDbms(String): void
+ setDbmsHost(String): void
+ setDbSchema(String): void
+ setJdbcDriver(String): void
+ setNoOfColumns(int): void
+ setPassword(String): void
+ setQuery(String): void
+ setResult(Result): void
+ setRs(ResultSet): void
+ setRsMetaData(ResultSetMetaData): void
+ setData(Object[][]): void
+ setStatus(String): void
+ setStmt(Statement): void
+ setUser(int): void
+ setUserName(String): void
```

ChartBean:

+ ChartBean
+ createBarChart(String[], double[], double[], double[]): JFreeChart + createPieChart(String, double, double, double, double, double): JFreeChart + createTimeSeriesChart(double[], String[]): JFreeChart

DataBean:

+ DataBean
- variableName: String - dataType: String - variableType: String - dataValue: String - dataTypeList: ArrayList<String>
+ getDataType(): String + getDataTypeList(): ArrayList<String> + getDataValue(): String + getVariableName(): String + getVariableType(): String + init(): void + setDataType(String): void + setDataTypeList(ArrayList<String>): void + setDataValue(String): void + setVariableName(String): void + setVariableType(String): void

MessageBean:

+ MessageBean
- responseMessage: String - errorMessage: String - flagcondition: String
+ getErrorMessage(): String + getFlagcondition(): String + getResponseMessage(): String + init(): void + setErrorMessage(String): void + setFlagcondition(String): void + setResponseMessage(String): void

QuestionBean:

+ QuestionsBean
- testid: int - qid: int - questiontype: String - questiontext: String - answers: String
+ getAnswers(): String + getQid(): int + getQuestiontext(): String + getQuestiontype(): String + getTestid(): int + setAnswers(String): void + setQid(int): void + setQuestiontext(String): void + setQuestiontype(String): void + setTestid(int): void

User:

+ User
<ul style="list-style-type: none">- userId: String- userName: String- password: String- fName: String- emailID: String- loginStartTime: String- loginEndTime: String- userType: String- user: int
<ul style="list-style-type: none">+ getEmailID(): String+ getfName(): String+ getLoginEndTime(): String+ getLoginStartTime(): String+ getPassword(): String+ getUser(): int+ getUserId(): String+.getUserName(): String+ getUserType(): String+ setEmailID(String): void+ setfName(String): void+ setLoginEndTime(String): void+ setLoginStartTime(String): void+ setPassword(String): void+ setUser(int): void+ setUserId(String): void+ setUserName(String): void+ setUserType(String): void

ActionBeanDatabaseAccess:

+ActionBeanDatabaseAccess
- tableName: String - columnNames: List<String> - tableViewList: List<String> - columnNamesSelected: List<String> - dbmsUserBean: DbmsUserBean - result: Result - mBean: MessageBean - tableListRendered: boolean - renderSet: boolean - renderCols: boolean - renderQuery: boolean - renderUserQuery: boolean - columnListRendered: boolean - userQuery: String - numberColumns: int - numberRows: int - createTables: List<String>
+ createTables(): void + displayColumns(): void + displaySelectedColumns(): void + displayTableName(): void + displayTables(): void + dropSelectedTable(): void + executeUserQuery(): void + getColumnNames(): List<String> + getColumnNamesSelected(): List<String> + getCreateTables(): List<String> + getDbmsUserBean(): DbmsUserBean + getNumberColumns(): int + getNumberRows(): int + getResult(): Result + getTableName(): String + getTableViewList(): List<String> + getUserQuery(): String + isColumnListRendered(): boolean + isRenderCols(): boolean + isRenderQuery(): boolean + isRenderSet(): boolean + isRenderUserQuery(): boolean + isTableListRendered(): boolean + reset(): String + setColumnListRendered(boolean): void + setColumnNames(List<String>): void + setColumnNamesSelected(List<String>): void + setCreateTables(List<String>): void + setDbmsUserBean(DbmsUserBean): void + setNumberColumns(int): void + setNumberRows(int): void + setRenderCols(boolean): void + setRenderQuery(boolean): void + setRenderSet(boolean): void + setRenderUserQuery(boolean): void + setResult(Result): void + setTableListRendered(boolean): void + setTableName(String): void + setTableViewList(List<String>): void + setUserQuery(String): void

ActionBeanGraphics:

+ ActionBeanGraphics
<ul style="list-style-type: none">- exam: String- sData: Object[][]- XYchartFile: String- user: User- renderChart: boolean- renderBarChart: boolean- barchartFile: String- renderPieChart: boolean- piechartFile: String
<ul style="list-style-type: none">+ generateBarGraph(): void+ generateGraph(): void+ generatePieChart(): void+ getBarchartFile(): String+ getExam(): String+ getPiechartFile(): String+ getsData(): Object[][]+ getXYchartFile(): String+ isRenderBarChart(): boolean+ isRenderChart(): boolean+ isRenderPieChart(): boolean+ setBarchartFile(String): void+ setExam(String): void+ setPiechartFile(String): void+ setRenderBarChart(boolean): void+ setRenderChart(boolean): void+ setRenderPieChart(boolean): void+ setsData(Object[][]): void+ setXYchartFile(String): void

ActionBeanImport:

```

+ ActionBeanImport
- message:
MessageBean
- fileImport: boolean
- fileImportError: boolean
- fileName: String
- fileSize: long
- table: String
- uploadedFile: UploadedFile
- fileLabel:String
- fileContentType: String
- tableName:String
- context: FacesContext
- user: User
- cm: String
- course: String
- startDate: String
- endDate: String
- duration: String
- rosterOrTest: String
- fileType: String
- tableNameExport:
List<String>
- checkRosterOrTest: boolean
- userbean: DbmsUserBean
- downloadTable: String
- downloadfileName: String

+ actionBeanExport(): String
+ displayDataExport(): String
+ downloadFile(): void
+ getContext(): FacesContext
+ getContextPath(): String
+ getCourse(): String
+ getCm(): String
+ getDataBean(): ArrayList<DataBean>
+ getDbmsUserBean(): DbmsUserBean
+ getDownloadfileName(): String
+ getDownloadTable(): String
+ getDuration(): String
+ getEndDate(): String
+ getFileContentType(): String
+ getFileLabel(): String
+ getFileName(): String
+ getFileSize(): long
+ getFileType(): String
+ getmBean(): MessageBean
+ getMessage(): MessageBean
+ getNumberRows(): int
+ getRosterOrTest(): String
+ getStartDate(): String
+ getTable(): String
+ getTableName(): String
+ getTableNameExport(): List<String>
+ getUploadedFile(): UploadedFile
+ getUploadedFileContents(): String
+ getUser(): List<String>
+ getUserBean(): DbmsUserBean
+ init(): void
+ isCheckRosterOrTest(): boolean
+ isFileImport(): boolean
+ isFileImportError(): boolean
+ isRenderParseTable(): boolean
+ methodRosterOrTest(): void
+ processDataImport(): String
+ processFileUpload(): String
+ reset(): String
+ setCheckRosterOrTest(boolean): void
+ setContext(FacesContext): void
+ setContextPath(String): void
+ setCourse(String): void
+ setCm(String): void
+ setDataBean(ArrayList<DataBean>): void
+ setDbmsUserBean(DbmsUserBean): void
+ setDownloadfileName(String): void
+ setDownloadTable(String): void
+ setDuration(String): void
+ setEndDate(String): void
+ setFileContentType(String): void
+ setFileImport(boolean): void
+ setFileImportError(boolean): void
+ setFileLabel(String): void
+ setFileName(String): void
+ setFileSize(long): void
+ setFileType(String): void
+ setmBean(MessageBean): void
+ setMessage(MessageBean): void
+ setNumberRows(int): void
+ setRenderParseTable(boolean): void
+ setRosterOrTest(String): void
+ setStartDate(String): void
+ setTable(String): void
+ setTableName(String): void
+ setTableNameExport(List<String>): void
+ setUploadedFile(UploadedFile): void
+ setUploadedFileContents(String): void
+ setUser(User): void
+ setUserBean(DbmsUserBean): void
+ uploadFile(): void

```

ActionBeanStatistics:

```
+ActionBeanStatistics
- exam: String
- minValue: double
- scores[]: double
- maxValue: double
- median: double
- mean: double
- variance: double
- std: double
- q1: double
- q3: double
- iqr: double
- range: double
- dbmsUserBean: DbmsUserBean
- mBean: MessageBean
- resultSet: ResultSet
- renderstats: boolean
- regXam1: String
- regXam2: String
- x[]: double
- y[]: double
- intercept: double
- slope: double
- rsq: double
- significance: double
- interceptStdErr: double
- slopeStdErr: double
- fstatistics: double
- pValue: double
- equation: String

generateStats(): void
getEquation(): String
getExam(): String
getFstatistics(): double
getIntercept(): double
getInterceptStdErr(): double
getIqr(): double
getMaxValue(): double
getMean(): double
getMedian(): double
getMinValue(): double
getpValue(): double
getQ1(): double
getQ3(): double
getRange(): double
getRegression(): void
getRegXam1(): String
getRegXam2(): String
getResultSet(): ResultSet
getRsq(): double
getScores(): double[]
getScoresX(String): void
getScoresY(String): void
getSignificance(): double
getSlope(): double
getSlopeStdErr(): double
getStd(): double
getVariance(): double
getX(): double[]
getY(): double[]
isRenderstats(): boolean
setEquation(String): void
setExam(String): void
setFstatistics(double): void
setIntercept(double): void
setInterceptStdErr(double): void
setIqr(double): void
setMaxValue(double): void
setMean(double): void
setMedian(double): void
setMinValue(double): void
setpValue(double): void
setQ1(double): void
setQ3(double): void
setRange(double): void
setRegXam1(String): void
setRegXam2(String): void
setRenderstats(boolean): void
setResultSet(ResultSet): void
setRsq(double): void
setScores(double[]): void
setSignificance(double): void
setSlope(double): void
setSlopeStdErr(double): void
setStd(double): void
setVariance(double): void
setX(double[]): void
setY(double[]): void
```

ActionBeanStudentTest:

+ ActionBeanStudentTest
<ul style="list-style-type: none">- userbean: DbmsUserBean- message: MessageBean- user: User- result: Result- columnNames: String[]- renderTests: boolean- testId: int- renderFeedBack: boolean- feedbackresult: Result- feedBackcolumnNames: String[]- cid[]: int- testid[]: int- CRN[]: String- course[]: String- cid_list: List<Integer>- testid_list: List<Integer>- crn_list: List<String>- course_list: List<String>- questions: List<QuestionsBean>
<ul style="list-style-type: none">+ getCid(): int[]+ getCid_list(): List<Integer>+ getColumnNames(): String[]+ getCourse(): String[]+ getCourse_list(): List<String>+ getCRN(): String[]+ getCrn_list(): List<String>+ getFeedBackcolumnNames(): String[]+ getFeedbackresult(): Result+ getQuestions(): List<QuestionsBean>+ getResult(): Result+ getTestId(): int[]+ getTestId(): int+ getTestId_list(): List<Integer>+ isRenderFeedBack(): boolean+ isRenderTests(): boolean+ setCid(int[]): void+ setCid_list(List<Integer>): void+ setColumnNames(String[]): void+ setCourse(String[]): void+ setCourse_list(List<String>): void+ setCRN(String[]): void+ setCrn_list(List<String>): void+ setFeedBackcolumnNames(String[]): void+ setFeedbackresult(Result): void+ setQuestions(List<QuestionsBean>): void+ setRenderFeedBack(boolean): void+ setRenderTests(boolean): void+ setResult(Result): void+ setTestId(int[]): void+ setTestId(int): void+ setTestId_list(List<Integer>): void+ showFeedBack(): void+ showTests(): void+ submitTest(): String+ takeTest(): String