**Student Details**

| Repository Name | **DBS25P069** |
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| Registration Number | 2024-CS-69 |

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| ***Project*** |  |
| Project Title | Faculty Workload and Resource Allocation System |
| Executive Summary | *[What is the project about? A clear description of the project. At least 300 words long in your words, how you understood project.]* |

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| ***Interface Name*** | Consumables Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | textBox1 | TextBox | Consumables, ConsumableID | consumables.consumable\_id | | textBox9 | TextBox | Consumable, ItemName | consumables.consumable\_id | | dataTable | dataGridView | Consumables | **SELECT \* FROM consumables** | | guna2GradientButton1 | Button | Consumables | INSERT INTO consumables (consumable\_id, item\_name) VALUES  ({consumable.ConsumableID},'{consumable.ItemName}’) | | guna2GradientButton2 | Button | Consumables | UPDATE consumables SET item\_name = '{c.ItemName}' WHERE consumable\_id = {c.ConsumableID} | | guna2GradientButton3 | Button | Consumables | DELETE FROM consumables WHERE consumable\_id = {ConsumableID} | | |

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| ***Interface Name*** | Course Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | Course | SELECT \* FROM courses | | textBox1 | TextBox | Course, CourseID | courses.course\_id | | textBox9 | TextBox | Course, CourseName | courses.course\_name | | textBox7 | TextBox | Course, CourseType | courses. course\_type | | textBox2 | TextBox | Course, ContactHours | courses.contact\_hours | | textBox4 | TextBox | Course, CreditHours | courses. credit\_hours | | guna2GradientButton1 | Button | Course | INSERT INTO courses(course\_id,course\_name, course\_type, credit\_hours, contact\_hours) VALUES({course.CourseID},'{course.CourseName}','{course.CourseType}',{course.CreditHours},{course.ContactHours}) | | guna2GradientButton2 | Button | Course | Update courses SET course\_name = '{c.CourseName}',  Course\_Type = '{c.CourseType}',  credit\_Hours = {c.CreditHours},  contact\_Hours = {c.ContactHours} where course\_id = {c.CourseID} | | guna2GradientButton3 | Button | Course | Delete from courses where course\_id = {CourseID} | | guna2GradientButton4 | Button | Course | UI.AdminStaff.Form10 form10 = new UI.AdminStaff.Form10();  this.Hide();  form10.Show(); | | |

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| ***Interface Name*** | Faculty Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | Faculty | SELECT \* FROM faculty | | textBox1 | TextBox | Faculty, FacultyID | faculty.faculty\_id | | textBox9 | TextBox | Faculty, FacultyName | faculty.name | | textBox7 | TextBox | Faculty, FacultyEmail | faculty.email | | textBox2 | TextBox | Faculty, FacultyContact | faculty.contact | | textBox4 | TextBox | Faculty, DesignationID | faculty.designation\_id | | textBox3 | TextBox | Faculty, ResearchArea | faculty.reasearch\_area | | textBox5 | TextBox | Faculty, Hours | faculty.total\_ teaching\_hours | | textBox6 | TextBox | Faculty, UserID | faculty.user\_id | | guna2GradientButton1 | Button | Faculty | INSERT INTO faculty(faculty\_id, name, email, contact,designation\_id,research\_area,total\_teaching\_hours,user\_id) VALUES({faculty.FacultyID},'{faculty.FacultyName}','{faculty.FacultyEmail}',{faculty.FacultyContact},{faculty.DesignationID},'{faculty.ResearchArea}',{faculty.Hours},{faculty.UserID}) | | guna2GradientButton2 | Button | Faculty | Update faculty SET name = '{f.FacultyName}',  email = '{f.FacultyEmail}',  contact = '{f.FacultyContact}',  designation\_id = {f.DesignationID}, research\_area = '{f.ResearchArea}',  total\_teaching\_hours = {f.Hours},user\_id = {f.UserID} where faculty\_id = {f.FacultyID} | | guna2GradientButton3 | Button | Faculty | Delete from faculty where faculty\_id = {FacultyID} | | guna2GradientButton4 | Button | Faculty | UI.AdminStaff.Form10 form10 = new UI.AdminStaff.Form10();  this.Hide();  form10.Show(); | | |

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| ***Interface Name*** | Faculty Course Schedule Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | AdminCourseSchedule | SELECT \* FROM faculty\_course\_schedule | | textBox1 | TextBox | AdminCourseSchedule, ScheduleID | faculty\_course\_schedule.schedule\_id | | textBox9 | TextBox | AdminCourseSchedule, FacultyCourseID | faculty\_course\_schedule.faculty\_course\_id | | textBox7 | TextBox | AdminCourseSchedule, RoomID | faculty\_course\_schedule.room\_id | | textBox2 | TextBox | AdminCourseSchedule,  DayOfWeek | faculty\_course\_schedule.day\_of\_week | | textBox4 | TextBox | AdminCourseSchedule, StartTime | faculty\_course\_schedule.start\_time | | textBox3 | TextBox | AdminCourseSchedule, EndTime | faculty\_course\_schedule.end\_time | | guna2GradientButton1 | Button | AdminCourseSchedule | INSERT INTO faculty\_course\_schedule(schedule\_id, faculty\_course\_id, room\_id, day\_of\_week, start\_time, end\_time) VALUES({schedule.ScheduleID},{schedule.FacultyCourseID}, {schedule.RoomID}, '{schedule.DayOfWeek}', '{schedule.StartTime}', '{schedule.EndTime}') | | guna2GradientButton2 | Button | AdminCourseSchedule | UPDATE faculty\_course\_schedule SET faculty\_course\_id = {schedule.FacultyCourseID}, room\_id = {schedule.RoomID}, day\_of\_week = '{schedule.DayOfWeek}', start\_time = '{schedule.StartTime}', end\_time = '{schedule.EndTime}' WHERE schedule\_id = {schedule.ScheduleID} | | guna2GradientButton3 | Button | AdminCourseSchedule | DELETE FROM faculty\_course\_schedule WHERE schedule\_id = {scheduleID} | | guna2GradientButton4 | Button | AdminCourseSchedule | UI.AdminStaff.Form10 form10 = new UI.AdminStaff.Form10();  this.Hide();  form10.Show(); | | |

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| ***Interface Name*** | Projects Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | Projects | SELECT \* FROM projects | | textBox1 | TextBox | Projects, ProjectID | projects.project\_id | | textBox9 | TextBox | Projects, Title | projects.title | | textBox7 | TextBox | Projects, Description | projects.description | | guna2GradientButton1 | Button | Projects | INSERT INTO projects(project\_id, title, description) VALUES({project.ProjectID}, '{project.Title}', '{project.Description}') | | guna2GradientButton2 | Button | Projects | UPDATE projects SET  title = '{project.Title}', description = '{project.Description}' WHERE project\_id = {project.ProjectID} | | guna2GradientButton3 | Button | Projects | DELETE FROM projects WHERE project\_id = {projectID} | | guna2GradientButton4 | Button | Projects | UI.AdminStaff.Form10 form10 = new UI.AdminStaff.Form10();  this.Hide();  form10.Show(); | | |

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| ***Interface Name*** | Rooms Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | Rooms | SELECT \* FROM rooms | | textBox1 | TextBox | Rooms, RoomID | rooms.room\_id | | textBox9 | TextBox | Rooms, RoomName | rooms.room\_name | | textBox7 | TextBox | Rooms, RoomTyoe | rooms.room\_type | | textBox2 | TextBox | Rooms, Capacity | rooms. capacity | | guna2GradientButton1 | Button | Rooms | INSERT INTO rooms(room\_id, room\_name, room\_type, capacity) VALUES({room.RoomID}, '{room.RoomName}', '{room.RoomType}', {room.Capacity}) | | guna2GradientButton2 | Button | Rooms | UPDATE rooms SET  room\_name = '{room.RoomName}', room\_type = '{room.RoomType}', capacity = {room.Capacity} WHERE room\_id = {room.RoomID} | | guna2GradientButton3 | Button | Rooms | DELETE FROM rooms WHERE room\_id = {roomID} | | guna2GradientButton4 | Button | Rooms | UI.AdminStaff.Form10 form10 = new UI.AdminStaff.Form10();  this.Hide();  form10.Show(); | | |

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| ***Interface Name*** | Semesters Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | Semesters | SELECT \* FROM semesters | | textBox1 | TextBox | Semesters, SemesterID | semesters.semester\_id | | textBox9 | TextBox | Semesters, Term | semesters. term | | textBox7 | TextBox | Semesters, Year | semesters.year | | guna2GradientButton1 | Button | Semesters | INSERT INTO semesters(semester\_id, term, year) VALUES({semester.SemesterID}, '{semester.Term}', {semester.Year}) | | guna2GradientButton2 | Button | Semesters | UPDATE semesters SET  term = '{semester.Term}', year = {semester.Year} WHERE semester\_id = {semester.SemesterID} | | guna2GradientButton3 | Button | Semesters | DELETE FROM semesters WHERE semester\_id = {semesterID} | | guna2GradientButton4 | Button | Semesters | UI.AdminStaff.Form10 form10 = new UI.AdminStaff.Form10();  this.Hide();  form10.Show(); | | |

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| ***Interface Name*** | Users Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | User | select \* from users | | textBox1 | TextBox | User, UserID | users.user\_id | | textBox9 | TextBox | User, Username | users.username | | textBox7 | TextBox | User, Email | users.email | | textBox2 | TextBox | User, Password | users.password\_hash | | textBox4 | TextBox | User, RoleID | users.role\_id | | guna2GradientButton1 | Button | User | INSERT INTO users (user\_id, username, email, password\_hash, role\_id) VALUES({user.UserID},'{user.Username}','{user.Email}','{HashedPassword}','{user.RoleID}') | | guna2GradientButton2 | Button | User | Update users SET Password\_hash = '{HashedPassword}', username = '{user.Username}',  email = '{user.Email}', role\_id = '{user.RoleID}' where user\_id = '{user.UserID}' | | guna2GradientButton3 | Button | User | DELETE FROM users WHERE user\_id = {UserID} | | guna2GradientButton4 | Button | User | UI.AdminStaff.Form10 form10 = new UI.AdminStaff.Form10();  this.Hide();  form10.Show(); | | |

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| ***Interface Name*** | Faculty Roles Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | FacultyAdminRole | SELECT \* FROM faculty\_admin\_roles | | textBox1 | TextBox | FacultyAdminRole, AdminRoleID | faculty\_admin\_roles,admin\_role\_id | | textBox9 | TextBox | FacultyAdminRole,FacultyID | faculty\_admin\_roles,faculty\_id | | textBox7 | TextBox | FacultyAdminRole,RoleName | faculty\_admin\_roles,role\_name | | textBox2 | TextBox | FacultyAdminRole,SemesterID | faculty\_admin\_roles,semester\_id | | guna2GradientButton1 | Button | FacultyAdminRole | INSERT INTO faculty\_admin\_roles(admin\_role\_id, faculty\_id, role\_name, semester\_id) VALUES({facultyAdminRole.AdminRoleID}, {facultyAdminRole.FacultyID}, '{facultyAdminRole.RoleName}', {facultyAdminRole.SemesterID}) | | guna2GradientButton2 | Button | FacultyAdminRole | UPDATE faculty\_admin\_roles SET role\_name = '{facultyAdminRole.RoleName}', semester\_id = {facultyAdminRole.SemesterID} WHERE admin\_role\_id = {facultyAdminRole.AdminRoleID} AND faculty\_id = {facultyAdminRole.FacultyID} | | guna2GradientButton3 | Button | FacultyAdminRole | DELETE FROM faculty\_admin\_roles WHERE admin\_role\_id = {AdminRoleID} | | guna2GradientButton4 | Button | FacultyAdminRole | UI.DepartmentHead.HeadDasboard newform = new UI.DepartmentHead.HeadDasboard  ();  this.Hide();  newform.Show(); | | |

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| ***Interface Name*** | Faculty Courses Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | FacultyCourses | SELECT \* FROM faculty\_courses | | textBox1 | TextBox | FacultyCourses, FacultyCourseID | FacultyCourses ,faculty\_course\_id | | textBox9 | TextBox | FacultyCourses, FacultyID | FacultyCourses ,faculty\_id | | textBox7 | TextBox | FacultyCourses, CourseID | FacultyCourses ,course\_id | | textBox2 | TextBox | FacultyCourses, SemesterID | FacultyCourses ,semester\_id | | guna2GradientButton1 | Button | FacultyCourses | INSERT INTO faculty\_courses(faculty\_course\_id, faculty\_id, course\_id, semester\_id) VALUES({facultyCourse.FacultyCourseID}, {facultyCourse.FacultyID}, {facultyCourse.CourseID}, {facultyCourse.SemesterID}) | | guna2GradientButton2 | Button | FacultyCourses | UPDATE faculty\_courses SET faculty\_id = {facultyCourse.FacultyID}, course\_id = {facultyCourse.CourseID}, semester\_id = {facultyCourse.SemesterID} WHERE faculty\_course\_id = {facultyCourse.FacultyCourseID} | | guna2GradientButton3 | Button | FacultyCourses, status\_id | DELETE FROM faculty\_courses WHERE faculty\_course\_id = {facultyCourseID} | | guna2GradientButton4 | Button | FacultyCourses, status\_id | UI.DepartmentHead.HeadDasboard newform = new UI.DepartmentHead.HeadDasboard();  this.Hide();  newform.Show(); | | |

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| ***Interface Name*** | Faculty Projects Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | FacultyProjects | SELECT \* FROM faculty\_projects | | textBox1 | TextBox | FacultyProjects, FacultyProjectID | FacultyProjects,faculty\_project\_id | | textBox9 | TextBox | FacultyProjects, FacultyID | FacultyProjects,faculty\_id | | textBox7 | TextBox | FacultyProjects, ProjectID | FacultyProjects,project\_id | | textBox4 | TextBox | FacultyProjects, SemesterID | FacultyProjects,semester\_id | | textBox2 | TextBox | FacultyProjects,SupervisionHours | FacultyProjects,supervision\_hours | | guna2GradientButton1 | Button | FacultyProjects | INSERT INTO faculty\_projects(faculty\_project\_id, faculty\_id, project\_id, semester\_id, supervision\_hours) VALUES({facultyProject.FacultyProjectID}, {facultyProject.FacultyID}, {facultyProject.ProjectID}, {facultyProject.SemesterID}, {facultyProject.SupervisionHours}) | | guna2GradientButton2 | Button | FacultyProjects | UPDATE faculty\_projects SET faculty\_id = {facultyProject.FacultyID}, project\_id = {facultyProject.ProjectID}, semester\_id = {facultyProject.SemesterID}, supervision\_hours = {facultyProject.SupervisionHours} WHERE faculty\_project\_id = {facultyProject.FacultyProjectID} | | guna2GradientButton3 | Button | FacultyProjects | DELETE FROM faculty\_projects WHERE faculty\_project\_id = {facultyProjectID} | | guna2GradientButton4 | Button | FacultyProjects | UI.DepartmentHead.HeadDasboard newform = new UI.DepartmentHead.HeadDasboard();  this.Hide();  newform.Show(); | | |
| ***Interface Name*** | Faculty Requests Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | FacultyRequests | SELECT \* FROM faculty\_requests WHERE status\_id = 8 | | textBox1 | TextBox | FacultyRequests, RequestID | FacultyProjects,request\_id | | textBox9 | TextBox | FacultyRequests, FacultyID | FacultyProjects,faculty\_id | | textBox7 | TextBox | FacultyRequests, ItemID | FacultyProjects,item\_id | | textBox4 | TextBox | FacultyRequests, Quantity | FacultyProjects,quantity | | textBox2 | TextBox | FacultyRequests,StatusID | FacultyProjects,status\_id | | guna2GradientButton1 | Button | FacultyRequests | INSERT INTO faculty\_requests(request\_id, faculty\_id, item\_id, quantity, status\_id, request\_date) VALUES({facultyRequest.RequestID},{facultyRequest.FacultyID}, {facultyRequest.ItemID}, {facultyRequest.Quantity}, {facultyRequest.StatusID}, '{formattedDate}') | | guna2GradientButton2 | Button | FacultyRequests | UPDATE faculty\_requests SET faculty\_id = {facultyRequest.FacultyID}, item\_id = {facultyRequest.ItemID},quantity = {facultyRequest.Quantity}, status\_id = {facultyRequest.StatusID}, request\_date = '{formattedDate}' WHERE request\_id = {facultyRequest.RequestID} | | guna2GradientButton3 | Button | FacultyRequests | DELETE FROM faculty\_requests WHERE request\_id = {requestID} | | guna2GradientButton4 | Button | FacultyRequests | UI.FacultyMember.StaffDashboard newform = new UI.FacultyMember.StaffDashboard();  this.Hide();  newform.Show(); | | |
| ***Interface Name*** | Faculty Room Allocations Management |
| *Picture*     |  |  |  |  | | --- | --- | --- | --- | | **UI Component Name** | **Type of UI component** | **Class, Attribute name** | **Linked to which database column/table** | | dataTable | dataGridView | FacultyRoomAllocations | SELECT \* FROM faculty\_room\_allocations | | textBox1 | TextBox | FacultyRoomAllocations, AllocationID | FacultyProjects,allocation\_id | | textBox9 | TextBox | FacultyRoomAllocations, FacultyID | FacultyProjects,faculty\_id | | textBox7 | TextBox | FacultyRoomAllocations, RoomID | FacultyProjects,room\_id | | textBox4 | TextBox | FacultyRoomAllocations, ReservedHours | FacultyProjects,reserved\_hours | | textBox2 | TextBox | FacultyRoomAllocations,SemesterID | FacultyProjects,semester\_id | | guna2GradientButton1 | Button | FacultyRoomAllocations | INSERT INTO faculty\_room\_allocations(allocation\_id, faculty\_id, room\_id, reserved\_hours, semester\_id) VALUES({facultyRoomAllocation.AllocationID}, {facultyRoomAllocation.FacultyID}, {facultyRoomAllocation.RoomID}, {facultyRoomAllocation.ReservedHours}, {facultyRoomAllocation.SemesterID}) | | guna2GradientButton2 | Button | FacultyRoomAllocations | UPDATE faculty\_room\_allocations SET faculty\_id = {facultyRoomAllocation.FacultyID}, room\_id = {facultyRoomAllocation.RoomID}, reserved\_hours = {facultyRoomAllocation.ReservedHours}, semester\_id = {facultyRoomAllocation.SemesterID} WHERE allocation\_id = {facultyRoomAllocation.AllocationID} | | guna2GradientButton3 | Button | FacultyRoomAllocations | DELETE FROM faculty\_room\_allocations WHERE allocation\_id = {allocationID} | | guna2GradientButton4 | Button | FacultyRoomAllocations | UI.FacultyMember.StaffDashboard newform = new UI.FacultyMember.StaffDashboard();  this.Hide();  newform.Show(); | | |

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| ***Business Report-1*** |  |
| *Business Report Name:* | |
| *Sample of report:* | |
| *Query to build Report:* | |

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| ***Business Report-2*** |  |
| *Business Report Name:* | |
| *Sample of report:* | |
| *Query to build Report:* | |