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| AddModule.xaml |
| -Modules module  -ModuleController moduleController  -Calc calculations |
| +AddModule() : constructor  -async btn\_addClick : void  -async btnUpdateModule\_Click |

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| Dashboard.xaml |
| -connstring: string  -DashboardController dash\_contr |
| +Dashboard() : constructor  -Border\_Loaded: void  -async scheduler\_tick : void  -async Get\_SemesterData() : task  -async Highest\_Time() : task  -async Lowest\_Time() : task  -btnModule\_Click() : void  -tbModulesLink\_MouseDown() : void  -tbAddModulesLink\_MouseDown(): void |

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| ViewModules.xaml |
| -const connString: str  -ModuleModel module\_model  -ModuleInfo module\_info  -DisptacherTimer scheduler  -Student\_Number: getter, setter |
| +VieModules(): constructor  -Page\_Loaded(): void  -async scheduler\_Tick(): void  -async tbSearch\_MouseDown(): void  -async Get\_Modules(): Task<List<ModuleInfo>>  -async Count\_Modules() : Task<int>  -async Count\_Credits() : Task<int>  -async Average\_Hours() : Task<int>  -tbRemoveModule\_MouseEnter() : void  -tbRemoveModule\_MouseLeave(): void  -async tbRemoveModule\_MouseDown(): void |

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| LoginController |
| -connString: str |
| +async Login: Task<bool>  +Valid\_Input(): bool |

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| DashboardController |
| -currentYear : int  -highest\_time: int  -lowest\_time: int  -semester\_length : int  -semesterStartDate: str  -highest\_module: str |
| +DashbaordController(): constructor  + <<Property>> Current\_Year: int { get; set;}  + <<Property>> Highest\_Time: int { get; set;}  + <<Property>> Lowest\_Time: int {get; set;}  +<<Property>> Highest\_Module: str{ get; set;}  +<<Property>> Semester\_Length: {get; set;}  +<<Property>> Semester\_Start\_date: str{ get; set;}  +PropertyChangedEventHandler |

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| ModuleController |
| -const connString: str |
| +async Module\_Exists(): Task<bool>  +async Add\_Module(): Task  +async Get\_Studied\_Hours(): Task<int>  +Subtract\_Hours(): int  +async Update\_Module\_Hours: Task |

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| ModuleModel: <List> |

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| StudentController |
| +const connString: str  -<<Property>> User\_Exists: bool{get; set;} |
| +Validate\_FullName(): bool  +Validate\_Email(): bool  +Validate\_Password(): bool  +IsMatched(): bool  +Valid\_StudentNumber(): bool  +Valid\_Credentials(): bool  +async Create\_Student(): Task<bool>  +async User\_exists(): Task<bool> |

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| ModuleInfo |
| -student\_number: str  -moduleCode: str  -moduleName: str  -moduleCredit: int  -studyHoursRemaining: int  -modulecount: int  -totalcredits: int  -average\_time: int |
| +<<Property>> Student\_Number: str {get; set;}  +<<Property>> Module\_Code: str{get; set;}  +<<Property>> Module\_Name: str{get; set;}  +<<Property>> Module\_Credit: int {get; set}  +<<Property>> ModuleCount: int{get; set;}  +<<Property>> Total\_Credits: int{get; set;}  +<<Property>> Average\_Time: int{get; set;}  +<<Property>> Study\_Hours\_Remaining: int{get;set;}  -PropertyChanged: void |

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| Modules |
| -student\_number: str  -moduleCode: str  -moduleName: str  -moduleCredit: int  -studyHoursRemaining: int |
| +<<Property>> Student\_Number: str {get; set;}  +<<Property>> Module\_Code: str{get; set;}  +<<Property>> Module\_Name: str{get; set;}  +<<Property>> Module\_Credit: int {get; set}  +<<Property>> ClassHours: int {get; set}  +<<Property>> SemesterLength: int {get; set} |

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| Student |
| -studentName: str  -studentEmail: str  -studentPass: str  -studentConfirmPass: str  -studentNumber: str  -validCredentials: bool  -studentExists: bool  -RegSuccessful: bool |
| +<<Property>> Student\_Number: str {get; set;}  +<<Property>> Student\_FullName: str {get; set;}  +<<Property>> Student\_Email: str {get; set;}  +<<Property>> Student\_Password: str {get; set;}  +<<Property>> Student\_cnfPass: str {get; set;}  +<<Property>> Valid\_Credentials: str {get; set;}  +<<Property>> Registration\_Successful: str {get; set;} |

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| CustomModuleHours |
| -student\_number: str  -moduleCode: str |
| +<<Property>> Student\_Number: str {get; set;}  +<<Property>> Module\_Code: str{get; set;}  +<<Property>> Hours\_Studied: int{get; set;} |

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| Security |
| +Hash\_Password(): str |

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| Login |
| -LoginInfo login\_info  -Login\_Controller login\_Ctrl |
| -async tbLogin\_MouseDown(): void  -tbLink\_MouseDown(): void |

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| Navigation |
| +Student\_Email: {get; set;} |
| -tbDashboard\_MouseEnter(): void  -tbDashbaord\_MouseLeave(): void  -tbDashboard\_MouseDown(): void  -tbViewModule\_MouseEnter(): void  -tbViewModule\_MouseLeave(): void  -tbViewModule\_MouseDown(): void  -tbAddModule\_MouseEnter(): void  -tbAddModule\_MouseLeave(): void  -tbAddModule\_MouseDown(): void  -Border\_Loaded(): void  -lblUser\_MouseDown(): void |

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| Register |
| -Student student  -StudentController studentController |
| -TbRegister\_MouseLeave(): void  -TbLogin\_MouseEnter(): void  TbLogin\_MouseLeave(): void  -async TbRegister\_MouseDown(): void  -TbLogin\_MouseDown(): void |

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| MainWindow |
| -lblClose\_MouseDown(): void  -Border\_MouseDown(): void  -frmView\_Navigating(): void |