

Flows of Data Stores

[illegible]

Flow into Student Grades						
retrievedData (Student Grades - P2.2.2.)	retrievedData (Student Grades - P3.2.2.)	retrievedData (Student Grades - P3.3.2.)	retrievedData (Student Grades - P4.2.2.)	retrievedData (Student Grades - P4.3.2.)	StudentID (Student Grades - P5.2.3.)	CoursePrefix CourseNumber Year Semester (Student Grades - P5.2.4.)
Name OverallGPA RecordData StudentID CoursePrefix CourseNumber Grade Year Semester	Name OverallGPA RecordData StudentID CoursePrefix CourseNumber Grade Year Semester	Name OverallGPA RecordData StudentID CoursePrefix CourseNumber Grade Year Semester	Name OverallGPA RecordData StudentID CoursePrefix CourseNumber Grade Year Semester	Name OverallGPA RecordData StudentID CoursePrefix CourseNumber Grade Year Semester	StudentID	CoursePrefix CourseNumber Year Semester

Flow into Course Credit Hours
CoursePrefix CourseNumber Year Semester (P5.2.4. - Course Credit Hours)
CoursePrefix CourseNumber Year Semester

Flow out of Course Credit Hours
<div></div> <div>hours (Course Credit Hours - P5.2.4.)</div>
<div></div> <div>hours</div>

Flow into Student Info
StudentID (P5.2.2. - Course Credit Hours)
StudentID

Flow out of Student Info
StudentID, Name, OverallGPA (Course Credit Hours - P5.2.2.)

StudentID
Name
OverallGPA

Schemas

Student Info
<u>StudentID</u>
Name
OverallGPA

Student Grades
<u>StudentID</u>
<u>CoursePrefix</u>
<u>CourseNumber</u>
Grade
<u>Year</u>
<u>Semester</u>

Course Credit Hours
<u>CoursePrefix</u>
<u>CourseNumber</u>
<u>Year</u>
<u>Semester</u>
Hours

Student Info 3NF

<u>StudentID</u>	<u>CoursePrefix</u>	<u>CourseNum</u>	<u>Grade</u>	<u>Year</u>	<u>Semester</u>
189467	MAT	420	A	2021	Fall
475821	CSC	688	B	2021	Fall
356982	MAT	420	C	2021	Fall
573126	CSC	835	F	2021	Fall
821643	CSCS	835	A	2021	Fall
932567	CSC	688	A	2021	Fall
247591	MAT	420	A	2021	Fall

Course Credit Hours 3NF

<u>CoursePrefix</u>	<u>CourseNum</u>	<u>Year</u>	<u>Semester</u>	<u>Hours</u>
MAT	420	2019	Fall	3
MAT	420	2020	Spring	3
MAT	420	2020	Summer	3
MAT	420	2020	Fall	3
MAT	420	2021	Spring	3
MAT	420	2021	Summer	3
MAT	420	2021	Fall	3
MAT	420	2022	Spring	3
MAT	420	2022	Summer	3
MAT	420	2022	Fall	3
MAT	420	2023	Spring	3
MAT	420	2023	Summer	3
MAT	421	2019	Fall	3
MAT	421	2020	Spring	3
MAT	421	2020	Summer	3
MAT	421	2020	Fall	3
MAT	421	2021	Spring	3
MAT	421	2021	Summer	3

MAT	421	2021	Fall	3
MAT	421	2022	Spring	3
MAT	421	2022	Summer	3
MAT	421	2022	Fall	3
MAT	421	2023	Spring	3
MAT	421	2023	Summer	3
MAT	430	2019	Fall	3
MAT	430	2020	Spring	3
MAT	430	2020	Summer	3
MAT	430	2020	Fall	3
MAT	430	2021	Spring	3
MAT	430	2021	Summer	3
MAT	430	2021	Fall	3
MAT	430	2022	Spring	3
MAT	430	2022	Summer	3
MAT	430	2022	Fall	3
MAT	430	2023	Spring	3
MAT	430	2023	Summer	3
MAT	431	2019	Fall	3
MAT	431	2020	Spring	3
MAT	431	2020	Summer	3
MAT	431	2020	Fall	3
MAT	431	2021	Spring	3
MAT	431	2021	Summer	3
MAT	431	2021	Fall	3
MAT	431	2022	Spring	3
MAT	431	2022	Summer	3
MAT	431	2022	Fall	3
MAT	431	2023	Spring	3
MAT	431	2023	Summer	3
MAT	360	2019	Fall	3
MAT	360	2020	Spring	3
MAT	360	2020	Summer	3
MAT	360	2020	Fall	3
MAT	360	2021	Spring	3
MAT	360	2021	Summer	3
MAT	360	2021	Fall	3
MAT	360	2022	Spring	3
MAT	360	2022	Summer	3

MAT	360	2022	Fall	3
MAT	360	2023	Spring	3
MAT	360	2023	Summer	3
MAT	442	2019	Fall	3
MAT	442	2020	Spring	3
MAT	442	2020	Summer	3
MAT	442	2020	Fall	3
MAT	442	2021	Spring	3
MAT	442	2021	Summer	3
MAT	442	2021	Fall	3
MAT	442	2022	Spring	3
MAT	442	2022	Summer	3
MAT	442	2022	Fall	3
MAT	442	2023	Spring	3
MAT	442	2023	Summer	3
MAT	441	2019	Fall	3
MAT	441	2020	Spring	3
MAT	441	2020	Summer	3
MAT	441	2020	Fall	3
MAT	441	2021	Spring	3
MAT	441	2021	Summer	3
MAT	441	2021	Fall	3
MAT	441	2022	Spring	3
MAT	441	2022	Summer	3
MAT	441	2022	Fall	3
MAT	441	2023	Spring	3
MAT	441	2023	Summer	3
MAT	531	2019	Fall	3
MAT	531	2020	Spring	3
MAT	531	2020	Summer	3
MAT	531	2020	Fall	3
MAT	531	2021	Spring	3
MAT	531	2021	Summer	3
MAT	531	2021	Fall	3
MAT	531	2022	Spring	3
MAT	531	2022	Summer	3
MAT	531	2022	Fall	3
MAT	531	2023	Spring	3
MAT	531	2023	Summer	3

MAT	530	2019	Fall	3
MAT	530	2020	Spring	3
MAT	530	2020	Summer	3
MAT	530	2020	Fall	3
MAT	530	2021	Spring	3
MAT	530	2021	Summer	3
MAT	530	2021	Fall	3
MAT	530	2022	Spring	3
MAT	530	2022	Summer	3
MAT	530	2022	Fall	3
MAT	530	2023	Spring	3
MAT	530	2023	Summer	3
CSC	834	2019	Fall	3
CSC	834	2020	Spring	3
CSC	834	2020	Summer	3
CSC	834	2020	Fall	3
CSC	834	2021	Spring	3
CSC	834	2021	Summer	3
CSC	834	2021	Fall	3
CSC	834	2022	Spring	3
CSC	834	2022	Summer	3
CSC	834	2022	Fall	3
CSC	834	2023	Spring	3
CSC	834	2023	Summer	3
CSC	835	2019	Fall	3
CSC	835	2020	Spring	3
CSC	835	2020	Summer	3
CSC	835	2020	Fall	3
CSC	835	2021	Spring	3
CSC	835	2021	Summer	3
CSC	835	2021	Fall	3
CSC	835	2022	Spring	3
CSC	835	2022	Summer	3
CSC	835	2022	Fall	3
CSC	835	2023	Spring	3
CSC	835	2023	Summer	3
CSC	736	2019	Fall	3
CSC	736	2020	Spring	3
CSC	736	2020	Summer	3

CSC	736	2020	Fall	3
CSC	736	2021	Spring	3
CSC	736	2021	Summer	3
CSC	736	2021	Fall	3
CSC	736	2022	Spring	3
CSC	736	2022	Summer	3
CSC	736	2022	Fall	3
CSC	736	2023	Spring	3
CSC	736	2023	Summer	3
CSC	737	2019	Fall	3
CSC	737	2020	Spring	3
CSC	737	2020	Summer	3
CSC	737	2020	Fall	3
CSC	737	2021	Spring	3
CSC	737	2021	Summer	3
CSC	737	2021	Fall	3
CSC	737	2022	Spring	3
CSC	737	2022	Summer	3
CSC	737	2022	Fall	3
CSC	737	2023	Spring	3
CSC	737	2023	Summer	3
CSC	688	2019	Fall	3
CSC	688	2020	Spring	3
CSC	688	2020	Summer	3
CSC	688	2020	Fall	3
CSC	688	2021	Spring	3
CSC	688	2021	Summer	3
CSC	688	2021	Fall	3
CSC	688	2022	Spring	3
CSC	688	2022	Summer	3
CSC	688	2022	Fall	3
CSC	688	2023	Spring	3
CSC	688	2023	Summer	3
CSC	730	2019	Fall	3
CSC	730	2020	Spring	3
CSC	730	2020	Summer	3
CSC	730	2020	Fall	3
CSC	730	2021	Spring	3
CSC	730	2021	Summer	3

CSC	730	2021	Fall	3
CSC	730	2022	Spring	3
CSC	730	2022	Summer	3
CSC	730	2022	Fall	3
CSC	730	2023	Spring	3
CSC	730	2023	Summer	3
CSC	744	2019	Fall	3
CSC	744	2020	Spring	3
CSC	744	2020	Summer	3
CSC	744	2020	Fall	3
CSC	744	2021	Spring	3
CSC	744	2021	Summer	3
CSC	744	2021	Fall	3
CSC	744	2022	Spring	3
CSC	744	2022	Summer	3
CSC	744	2022	Fall	3
CSC	744	2023	Spring	3
CSC	744	2023	Summer	3
CSC	815	2019	Fall	3
CSC	815	2020	Spring	3
CSC	815	2020	Summer	3
CSC	815	2020	Fall	3
CSC	815	2021	Spring	3
CSC	815	2021	Summer	3
CSC	815	2021	Fall	3
CSC	815	2022	Spring	3
CSC	815	2022	Summer	3
CSC	815	2022	Fall	3
CSC	815	2023	Spring	3
CSC	815	2023	Summer	3
CSC	567	2019	Fall	3
CSC	567	2020	Spring	3
CSC	567	2020	Summer	3
CSC	567	2020	Fall	3
CSC	567	2021	Spring	3
CSC	567	2021	Summer	3
CSC	567	2021	Fall	3
CSC	567	2022	Spring	3
CSC	567	2022	Summer	3

CSC	567	2022	Fall	3
CSC	567	2023	Spring	3
CSC	567	2023	Summer	3
CSC	890	2019	Fall	4
CSC	890	2020	Spring	4
CSC	890	2020	Summer	4
CSC	890	2020	Fall	4
CSC	890	2021	Spring	4
CSC	890	2021	Summer	4
CSC	890	2021	Fall	4
CSC	890	2022	Spring	4
CSC	890	2022	Summer	4
CSC	890	2022	Fall	4
CSC	890	2023	Spring	4
CSC	890	2023	Summer	4
CSC	891	2019	Fall	4
CSC	891	2020	Spring	4
CSC	891	2020	Summer	4
CSC	891	2020	Fall	4
CSC	891	2021	Spring	4
CSC	891	2021	Summer	4
CSC	891	2021	Fall	4
CSC	891	2022	Spring	4
CSC	891	2022	Summer	4
CSC	891	2022	Fall	4
CSC	891	2023	Spring	4
CSC	891	2023	Summer	4
CSC	501	2019	Fall	2
CSC	501	2020	Spring	2
CSC	501	2020	Summer	2
CSC	501	2020	Fall	2
CSC	501	2021	Spring	2
CSC	501	2021	Summer	2
CSC	501	2021	Fall	2
CSC	501	2022	Spring	2
CSC	501	2022	Summer	2
CSC	501	2022	Fall	2
CSC	501	2023	Spring	2
CSC	501	2023	Summer	2

Student Info 3NF

StudentID	Name	OverallGPA
189467	Adam Cohen	3.1
475821	Eve Levi	4
356982	Noah Abraham	2.5
573126	Sarah Jacobson	3.5
821643	Isaac David	3.3
932567	Rebekah Solomon	3.33
247591	Jacob Moses	3.33
685734	Leah Samuelson	3.33
925618	Joseph Daniel	3.33
136794	Rachel Benjamin	3.33
574819	Miriam Joshua	3.33
829473	Aaron Calebson	3.33
346597	Ruth Deborah	3.33
512839	Naomi Elijah	3.33
947613	Boaz Isaiah	3.33
765823	Esther Jonathan	3.33
239874	Mordecai Nathan	3.33
496385	David Solomon	3.33
682934	Bathsheba Benjamin	3.33
751439	Samuel Gideon	3.33
983675	Delilah Micah	3.33
615928	Samson Levi	3.33
874513	Hannah Jeremiah	3.33
329641	Eli Nathan	3.33
548926	Abigail Isaacson	3.33
297368	Solomon Noah	3.33
416982	Isaac Joel	3.33
753924	Elijah Adamson	3.33
869415	Jonah Caleb	3.33
134578	Joshua Seth	3.33
592631	Caleb Jobson	3.33
416397	Sarah Leah	3.33
859623	Daniel Judah	3.33
723561	Isaiah Benjaminson	3.33
691384	Micah Abram	3.33
125943	Rebecca Joshua	3.33

736189	Jeremiah Jacobson	3.33
845762	Ezekiel David	3.33
397615	Gabriel Solomon	3.33
264539	Andrew Jonathan	3.33
538961	Elizabeth Samuelson	3.33
916452	Matthew Danielson	3.33
857136	Mark Benjamin	3.33
492183	Luke Josephson	3.33
731695	John Solomon	3.33
583641	Paul Levi	3.33
469812	Timothy David	3.33
218376	Stephen Benjaminson	3.33
957614	Philip Abraham	3.33
376429	James Isaacson	3.33
641293	Peter Jacobson	3.33
891347	Thomas Moses	3.33
275986	Mary Samuel	3.33
594823	Martha Adamson	3.33
687245	Lydia Sarah	3.33
329158	Priscilla Noah	3.33
417639	Aquila Caleb	3.33
928354	Phoebe Sethson	3.33
536197	Silas Levi	3.33
198672	Barnabas Benjamin	3.33
742536	Apollos Jacob	3.33
615289	Timothy Solomon	3.33
384752	Titus Samuelson	3.33
936271	Onesimus David	3.33
275419	Priscilla Benjaminson	3.33
461935	Junia Isaac	3.33
958273	Andrew Jonathanson	3.33
382746	Silas Solomon	3.33
617594	James Noah	3.33
539418	Mary Abrahamson	3.33
498257	Martha Joseph	3.33
815926	John Jacobson	3.33
327561	Lydia David	3.33
674219	Peter Solomon	3.33
982534	Phoebe Benjamin	3.33

541769	Ruth Samuel	3.33
397428	Naomi Adamson	3.33
862913	Jesse Levi	3.33
254961	Samson Abrahamson	3.33
716594	Solomon Jacob	3.33
983462	David Moses	3.33
428961	Rachel Davidson	3.33
519437	Aaron Solomonson	3.33
647519	Esther Noah	3.33
916483	Isaac Benjaminson	3.33
375429	Leah Adam	3.33
198745	Jacob Samuelson	3.33
824159	Benjamin Levi	3.33
579146	Sarah Solomon	3.33
136498	Moses Abrahamson	3.33
742569	Delilah David	3.33
953874	Joshua Jacobson	3.33
628571	Naomi Noah	3.33
419365	Samuel Benjamin	3.33
578142	Rachel Moseson	3.33
892437	Isaac Solomon	3.33
647913	Miriam Levi	3.33
356471	Ruth Abrahamson	3.33
713958	Adam Jacob	3.33
496813	Eve Samuelson	3.33
285734	Noah Levi	3.33
738126	Sarah Moses	3.33
964251	Abraham Benjaminson	3.33
571396	Jacob Solomon	3.33
824671	Leah Adamson	3.33
613598	Joseph Moseson	3.33
497835	Rebecca Levi	3.33
852316	Joshua David	3.33
369481	Rachel Solomonson	3.33
754913	David Noah	3.33
981346	Solomon Abraham	3.33
461829	Hannah Jacobson	3.33
523197	Benjamin Levi	3.33
817469	Isaac Samuelson	3.33

649713	Samuel Benjaminson	3.33
538197	Delilah Moses	3.33
274936	Esther Abrahamson	3.33
619587	Adam Jacobson	3.33
495173	Eve Solomon	3.33
836951	Noah Levi	3.33
257413	Sarah David	3.33
713596	Jacob Solomonson	3.33
962745	Joseph Adamson	3.33
547912	Rachel Benjamin	3.33
398271	Isaac Levi	3.33
815634	Moses Solomon	3.33
623849	Leah Noah	3.33
491826	Joshua Abrahamson	3.33
759318	David Jacob	3.33
386142	Rebecca Solomonson	3.33
924581	Benjamin Levi	3.33
572439	Solomon Moses	3.33
139867	Hannah Adamson	3.33
763958	Samuel Benjamin	3.33
928635	Aaron Levi	3.33
485619	Naomi David	3.33
725814	Adam Solomonson	3.33
519287	Eve Abraham	3.33
643529	Noah Jacobson	3.33
976513	Sarah Solomon	3.33
381456	Isaac Adamson	3.33
562491	Rachel Benjaminson	3.33
924375	Jacob Levi	3.33
497153	Leah Moses	3.33
635429	Joseph Solomonson	3.33
819647	Rebecca Noah	3.33
273856	Joshua Abraham	3.33
576921	David Jacobson	3.33
961738	Benjamin Solomon	3.33
428195	Moses Levi	3.33
598463	Solomon Moseson	3.33