Assignment 2
Examples

Last updated: **Saturday 13th November 4:31pm**
Most recent changes are shown in red ... older changes are shown in brown.

[Specification] [Database] [SQL Schema] [Grades+Rules] **[Examples]** [Testing] [Submitting] [Fixes+Updates]

Introduction

This document contains examples of output from the various scripts that you are required to develop.

Transcripts

You are not required to display e.g. `2778/36`. This is just to show
WAM = weighted_mark_sum / total_attempted_uoc to help with debugging.

```
$ ./trans 5124159
5124159 Magia, Tristan
COMP9318 17s1 Data Warehousing & Data Mining    65 CR   6uoc
COMP9319 17s1 Web Data Compression & Search      86 HD   6uoc
COMP9417 17s1 Machine Learning & Data Mining     78 DN   6uoc
COMP6714 17s2 Info Retrieval and Web Search      69 CR   6uoc
COMP9313 17s2 Big Data Management                77 DN   6uoc
COMP9444 17s2 Neural Networks, Deep Learning     88 HD   6uoc
UOC = 36, WAM = 2778/36 = 77.2

$ ./trans 5123788
5123788 Greenfield, Drew
COMP9021 17s1 Principles of Programming         100 HD   6uoc
COMP9311 17s1 Database Systems                   63 PS   6uoc
COMP9024 17s2 Data Structures & Algorithms       86 HD   6uoc
COMP9331 17s2 Computer Networks&Applications     79 DN   6uoc
GSOE9820 17s2 Project Management                 94 HD   6uoc
COMP9020 18s1 Foundations of Comp. Science       85 HD   6uoc
COMP9414 18s1 Artificial Intelligence            91 HD   6uoc
COMP9315 18s2 Database Systems Implementat'n     76 DN   6uoc
COMP9444 18s2 Neural Networks, Deep Learning     63 PS   6uoc
COMP9417 19T2 Machine Learning & Data Mining     96 HD   6uoc
COMP9313 19T3 Big Data Management                76 DN   6uoc
MATH5846 20T1 Intro to Prob and Stoch Proc        — SY   6uoc
MATH5856 20T1 Intro to Stats and Stat Comput      — SY   6uoc
COMP9900 20T2 Info Tech Project                 100 HD   6uoc
MATH5855 20T3 Multivariate Analysis             100 HD   6uoc
UOC = 90, WAM = 6654/78 = 85.3

$ ./trans 5146704
5146704 Kung, Xuanyan
COMP1927 17s1 Computing 2                         73 CR   6uoc
COMP2121 17s1 Microprocessors & Interfacing      55 PS   6uoc
```

```
ECON1101 17s1 Microeconomics 1                  65 CR   6uoc
MATH1081 17s1 Discrete Mathematics              65 CR   6uoc
COMP1531 17s2 Software Eng Fundamentals         54 PS   6uoc
COMP2041 17s2 Software Construction              – AF   fail
MATH2400 17s2 Finite Mathematics                43 FL   fail
MATH2859 17s2 Prob, Stats and Information        43 FL   fail
INFS1602 18x1 Digital Transformation in Bus      – AF   fail
COMP2111 18s1 System Modelling and Design       48 FL   fail
COMP2511 18s1 O–O Design & Programming          39 FL   fail
COMP3311 18s1 Database Systems                  32 FL   fail
SENG2021 18s1 Reqts & Design Workshop           75 DN   6uoc
COMP2041 18s2 Software Construction              – AF   fail
COMP3161 18s2 Concepts of Programming Lang.      – AF   fail
COMP3331 18s2 Computer Networks&Applications     – AF   fail
ECON1102 18s2 Macroeconomics 1                  36 FL   fail
COMP2511 20T2 O–O Design & Programming          36 FL   fail
COMP3121 20T2 Algorithms & Programming Tech     46 FL   fail
COMP3331 20T2 Computer Networks&Applications    45 FL   fail
COMP1521 20T3 Computer Systems Fundamentals      – AF   fail
GENC3004 20T3 Personal Finance                  47 FL   fail
UOC = 36, WAM = 4554/126 = 36.1

$ ./trans 5124862
5124862 Wehbe, Ran
COMP2121 17s1 Microprocessors & Interfacing     75 DN   6uoc
COMP2911 17s1 Eng. Design in Computing          68 CR   6uoc
COMP6443 17s1 Web Application Security           74 CR   6uoc
PSYC1023 17s1 Abnormal Psychology               66 CR   6uoc
COMP2041 17s2 Software Construction             61 PS   6uoc
COMP6445 17s2 Digital Forensics                 84 DN   6uoc
MATH1081 17s2 Discrete Mathematics              55 PS   6uoc
COMP3121 18s1 Algorithms & Programming Tech     61 PS   6uoc
COMP3231 18s1 Operating Systems                 64 PS   6uoc
COMP6841 18s1 Extended Security Engineering     73 CR   6uoc
COMP3161 18s2 Concepts of Programming Lang.     72 CR   6uoc
COMP6447 18s2 Security Assessment               51 PS   6uoc
COMP9444 18s2 Neural Networks, Deep Learning    51 PS   6uoc
COMP1531 19T1 Software Eng Fundamentals         59 PS   6uoc
COMP3900 19T1 Computer Science Project          60 PS   6uoc
COMP3141 19T2 Software Sys Des&Implementat'n    87 HD   6uoc
COMP3331 19T2 Computer Networks&Applications    54 PS   6uoc
COMP4920 19T3 Management and Ethics             80 DN   6uoc
UOC = 108, WAM = 7170/108 = 66.4

$ ./trans 5146401
5146401 KANG, Shuni
COMP9020 17s1 Foundations of Comp. Science      46 FL   fail
COMP9021 17s1 Principles of Programming         33 FL   fail
COMP9311 17s1 Database Systems                   – AF   fail
GSOE9820 17s1 Project Management                38 FL   fail
UOC = 0, WAM = 702/24 = 29.2

$ ./trans 5159189
5159189 Butturini Pajares, Diego
```

```
ARTS1210 18s1 Concepts of Asia               56 PS    6uoc
ARTS1570 18s1 Introductory Spanish A         84 DN    6uoc
INST1005 18s1 Key Debates in Intl Studies    63 PS    6uoc
MGMT1101 18s1 Global Business Environment     90 HD    6uoc
ARTS1571 18s2 Introductory Spanish B          86 HD    6uoc
ECON1101 18s2 Microeconomics 1                81 DN    6uoc
INST1006 18s2 The World in Transition         94 HD    6uoc
MGMT3102 18s2 Asia-Pacific Business           79 DN    6uoc
ARTS2570 19T1 Intermediate Spanish A          79 DN    6uoc
INST2003 19T1 Research Methods                87 HD    6uoc
MGMT2101 19T1 Int Bus & Multinat Operations   73 CR    6uoc
MGMT3721 19T1 Negotiation Skills              72 CR    6uoc
ARTS1620 19T2 Introductory Italian A          72 CR    6uoc
FINS1613 19T2 Business Finance                76 DN    6uoc
MGMT2102 19T2 Managing Across Cultures        64 PS    6uoc
MGMT3101 19T2 I'national Business Strategy   100 HD    6uoc
EXCH8010 19T3 BInst Exchange Program           - XE   24uoc
EXCH8035 20T1 BInst Exchange Program           - XE   18uoc
ARTS2457 20T2 China Imagined and Perceived    70 CR    6uoc
EXCH8033 20T2 BInst Exchange Program           - XE    6uoc
MGMT2725 20T2 Career Management                72 CR    6uoc
MGMT3003 20T2 Global Entrepreneurship         80 DN    6uoc
ARTS2813 20T3 International Security           90 HD    6uoc
ARTS3570 20T3 Advanced Spanish A              89 HD    6uoc
INST3900 20T3 Int Studies Advanced Seminar    74 CR    6uoc
UOC = 180, WAM = 10386/132 = 78.7



... MORE TO COME ...
```

But here's more info ...
there are two UOC totals in this question

- total_achieved_uoc = sum (uoc_i) where course_i is a "pass"
  this includes obvious ones like HD,DN,... but also ones like XE
  basically any couse with "yes" in the UOC column in the Grades table
- total_attempted_uoc = sum(uoc_i) for any course_i attempted
  even if the course was failed, we count its UOC; it was attempted
  any course which has "yes" in the WAM column in the Grades table
- weighted_mark_sum = sum(uoc_i * mark_i) for any course_i attempted
  any course which has "yes" in the WAM column in the Grades table
  if the course has no mark, treat the mark as zero

WAM = weighted_mark_sum / total_attempted_uoc

Rules

```
-- all the ???s are because we haven't put these Streams in the database
$ ./rules 3707
3707 Bachelor of Engineering (Hons), 192 UOC, 4.0 years
- offered by Faculty of Engineering
Academic Requirements:
```

Academic Requirements:
1 stream(s) from BE(Hons) Streams
– AEROAH ???
– BINFAH ???
– CEICAH ???

– CEICDH ???
– COMPBH Computer Engineering
– CVENAH ???
– CVENBH ???
– ELECAH ???
– ELECCH ???
– GMATDH ???
– MANFBH ???
– MECHAH ???
– MINEAH ???
– MTRNAH ???
– PETRAH ???
– SENGAH Software Engineering
– SOLAAH ???
– SOLABH ???
– TELEAH ???
Industrial Training
– ENGG4999 Industrial Training
12 UOC of General Education

$ **./rules 3778**
3778 Bachelor of Science (Comp Sci), 144 UOC, 3.0 years
– offered by School of Computer Science and Engineering
Academic Requirements:
1 stream(s) from Comp Sci Majors
– COMPA1 Computer Science
– COMPD1 Database Systems
– COMPE1 eCommerce Systems
– COMPI1 Artificial Intelligence
– COMPJ1 Programming Languages
– COMPN1 Computer Networks
– COMPS1 Embedded Systems
– COMPY1 Security Engineering
all courses from Foundational Computing
– COMP1511 Programming Fundamentals
– COMP1521 Computer Systems Fundamentals
– COMP1531 Software Eng Fundamentals
– COMP2511 O–O Design & Programming
– COMP2521 Data Structures and Algorithms
all courses from Comp Sci Maths
– MATH1081 Discrete Mathematics
– MATH1131 Mathematics 1A
  or MATH1141 Higher Mathematics 1A
– MATH1231 Mathematics 1B
  or MATH1241 Higher Mathematics 1B
all courses from Comp Sci Advanced Core
– COMP3121 Algorithms & Programming Tech
  or COMP3821 Ext Algorithms&Prog Techniques
– COMP3900 Computer Science Project

```
— COMP4920 Management and Ethics
12 UOC of General Education

$ ./rules COMPAS
COMPAS Artificial Intelligence

— offered by School of Computer Science and Engineering
Academic Requirements:
COMPAS Core
— COMP9414 Artificial Intelligence
  or COMP9814 Ext Artificial Intelligence
18 UOC courses from COMPAS Electives
— COMP4418 Knowledge Representation
— COMP9318 Data Warehousing & Data Mining
— COMP9417 Machine Learning & Data Mining
— COMP9418 Advanced Machine Learning
— COMP9434 Robotic Software Architecture
— COMP9444 Neural Networks, Deep Learning
— COMP9491 ???
— COMP9517 Computer Vision
— MATH5836 Data Mining
up to 6 UOC courses from COMPAS Disciplinary Electives
— courses matching BINF6###,BINF9###,COMP4###,COMP6###,COMP9###,GSOE92##

$ ./rules COMPA1
COMPA1 Computer Science
— offered by School of Computer Science and Engineering
Academic Requirements:
at least 30 UOC courses from COMPA1 Computing Electives
— courses matching ENGG2600,ENG3600,ENGG4600,COMP3###,COMP4###,COMP6###,COMP9##
at least 36 UOC of Free Electives

$ ./rules COMPSS
COMPSS Data Science and Engineering
— offered by School of Computer Science and Engineering
Academic Requirements:
between 6 and 12 UOC courses from COMPSS Algos/Stats Electives
— COMP4141 Theory of Computation
— COMP6741 Parameterized & Exact Comp.
— MATH5845 Time Series
— MATH5855 Multivariate Analysis
— MATH5905 Statistical Inference
— MATH5960 Bayesian Inference & Comput'n
between 6 and 12 UOC courses from COMPSS Databases Electives
— COMP9313 Big Data Management
— COMP9315 Database Systems Implementat'n
— COMP9318 Data Warehousing & Data Mining
— COMP9319 Web Data Compression & Search
— COMP9321 Data Services Engineering
between 6 and 12 UOC courses from COMPSS Machine Learning Electives
— COMP4418 Knowledge Representation
— COMP6714 Info Retrieval and Web Search
— COMP9417 Machine Learning & Data Mining
— MATH5836 Data Mining
— COMP9444 Neural Networks, Deep Learning
```

```
up to 6 UOC courses from COMPSS Disciplinary Electives
- courses matching BINF6###,BINF9###,COMP4###,COMP6###,COMP9###,GSOE92##



... MORE TO COME ...
```

Progession Checks

```
$ ./prog 5197273 3707 COMPBH
5197273 Wilson-Rogers, Darien
  3707 Bachelor of Engineering (Hons)
  COMPBH Computer Engineering

Completed:
COMP1511 19T1 Programming Fundamentals          84 DN   6uoc towards Foundationa
ENGG1000 19T1 Engineering Design                69 CR   6uoc towards COMPBH Des:
MATH1131 19T1 Mathematics 1A                    84 DN   6uoc towards COMPBH Math
COMP1521 19T2 Computer Systems Fundamentals     88 HD   6uoc towards Foundationa
MATH1231 19T2 Mathematics 1B                    54 PS   6uoc towards COMPBH Math
PHYS1121 19T2 Physics 1A                        85 HD   6uoc towards COMPBH Phys
COMP1531 19T3 Software Eng Fundamentals         52 PS   6uoc towards Foundationa
ELEC1111 19T3 Elec & Telecomm Eng               64 PS   6uoc towards COMPBH Phys
COMP2521 20T1 Data Structures and Algorithms     - SY   6uoc towards Foundationa
COMP3121 20T2 Algorithms & Programming Tech    100 HD   6uoc towards COMPBH Comp
COMP3231 20T2 Operating Systems                 71 CR   6uoc towards COMPBH Adva
COMP2511 20T3 O-O Design & Programming          94 HD   6uoc towards Foundationa
COMP3222 20T3 Digital Circuits and Systems      83 DN   6uoc towards COMPBH Adva
UOC = 78 so far

Remaining to complete degree:
- MATH2069 Mathematics 2A
- MATH2099 Mathematics 2B
- PHYS1221 Physics 1B
  or PHYS1231 Higher Physics 1B
- ELEC2133 Analogue Electronics
- ELEC2134 Circuits and Signals
- DESN2000 Engineering Design 2
- COMP3211 Computer Architecture
- COMP3601 Design Project A
- COMP4601 Design Project B
- COMP4920 Management and Ethics

- COMP4951 Research Thesis A
- COMP4952 Research Thesis B
- COMP4953 Research Thesis C
- ENGG4999 Industrial Training
at least 30 UOC courses from COMPBH Computing Electives
12 UOC of General Education



-- ADK courses are treated specially; their UOC counts once
-- normally, courses are assigned to satisfy just one requirement
```

```
-- after checking for regular requirement, also check if it is ADK.
-- courses that don't satisfy any requirement, don't contribute any UOC


$ ./prog 5123788
5123788 Greenfield, Drew
  8543 Master of Information Technology
  COMPSS Data Science and Engineering


Completed:
COMP9021 17s1 Principles of Programming       100 HD   6uoc towards PG Core Cou
COMP9311 17s1 Database Systems                 63 PS   6uoc towards PG Core Cou
COMP9024 17s2 Data Structures & Algorithms     86 HD   6uoc towards PG Core Cou
COMP9331 17s2 Computer Networks&Applications   79 DN   6uoc towards PG Core Cou
GSOE9820 17s2 Project Management               94 HD   6uoc towards Project Man
COMP9020 18s1 Foundations of Comp. Science     85 HD   6uoc towards COMPSS Disc
COMP9414 18s1 Artificial Intelligence          91 HD   0uoc does not satisfy an
COMP9315 18s2 Database Systems Implementat'n   76 DN   6uoc towards COMPSS Data
COMP9444 18s2 Neural Networks, Deep Learning   63 PS   6uoc towards COMPSS Mach
COMP9417 19T2 Machine Learning & Data Mining   96 HD   6uoc towards COMPSS Mach
COMP9313 19T3 Big Data Management              76 DN   6uoc towards COMPSS Data
MATH5846 20T1 Intro to Prob and Stoch Proc      - SY   0uoc does not satisfy an
MATH5856 20T1 Intro to Stats and Stat Comput    - SY   0uoc does not satisfy an
COMP9900 20T2 Info Tech Project                100 HD   6uoc towards MIT Project
MATH5855 20T3 Multivariate Analysis           100 HD   6uoc towards COMPSS Algo
UOC = 72 so far


Remaining to complete degree:
between 0 and 6 UOC courses from COMPSS Algos/Stats Electives
18 UOC from ADK Courses



-- if you want to get the same answer as below, you will need to
-- apply this SQL statement to your database
--  update academic_object_groups
--  set definition='ENGG1000,DESN2000,SENG2011,SENG2021,SENG3011'
--  where id = 686014;
-- if you don't, ENGG1000 will be treated as a Free Elective


$ ./prog 5198386
5198386 Dib, Karim
  3707 Bachelor of Engineering (Hons)
  SENGAH Software Engineering


Completed:

COMP1511 19T1 Programming Fundamentals         62 PS   6uoc towards Foundationa
ENGG1000 19T1 Engineering Design               51 PS   6uoc towards SENGAH Work
MATH1131 19T1 Mathematics 1A                   54 PS   6uoc towards SENGAH Math
CHEM1011 19T2 Chemistry 1A                      87 HD   6uoc towards Free Electi
COMP1521 19T2 Computer Systems Fundamentals     47 FL   fail does not count
MATH1081 19T2 Discrete Mathematics             71 CR   6uoc towards SENGAH Math
COMP1521 19T3 Computer Systems Fundamentals    58 PS   6uoc towards Foundationa
COMP1531 19T3 Software Eng Fundamentals        67 CR   6uoc towards Foundationa
MATH1231 19T3 Mathematics 1B                   56 PS   6uoc towards SENGAH Math
COMP2521 20T1 Data Structures and Algorithms    - SY   6uoc towards Foundationa
```

```
SENG2021 20T1 Reqts & Design Workshop           65 CR   6uoc towards SENGAH Work
COMP2041 20T2 Software Construction             46 FL   fail does not count
DESN2000 20T2 Engineering Design 2              80 DN   6uoc towards SENGAH Work
MATH2400 20T2 Finite Mathematics                35 FL   fail does not count
MATH2859 20T2 Prob, Stats and Information       31 FL   fail does not count
COMP2511 20T3 O-O Design & Programming          32 FL   fail does not count
COMP3311 20T3 Database Systems                  75 DN   6uoc towards SENGAH Adva
UOC = 72 so far

Remaining to complete degree:
- COMP2511 O-O Design & Programming
- MATH2400 Finite Mathematics
- MATH2859 Prob, Stats and Information
- SENG2011 Program Reasoning Workshop
- SENG3011 Software Eng Workshop 3
- COMP2041 Software Construction
- COMP3141 Software Sys Des&Implementat'n
- COMP3331 Computer Networks&Applications
- SENG4920 Ethics and Management
- COMP4951 Research Thesis A
- COMP4952 Research Thesis B
- COMP4953 Research Thesis C
- ENGG4999 Industrial Training
at least 36 UOC courses from SENGAH Discipline Electives
12 UOC of General Education


$ ./prog 5198386 3778 COMPA1
5198386 Dib, Karim
  3778 Bachelor of Science (Comp Sci)
  COMPA1 Computer Science

Completed:
COMP1511 19T1 Programming Fundamentals          62 PS   6uoc towards Foundationa
ENGG1000 19T1 Engineering Design                51 PS   6uoc towards Free Electi
MATH1131 19T1 Mathematics 1A                    54 PS   6uoc towards Comp Sci Ma
CHEM1011 19T2 Chemistry 1A                       87 HD   6uoc towards Free Electi
COMP1521 19T2 Computer Systems Fundamentals     47 FL   fail does not count
MATH1081 19T2 Discrete Mathematics              71 CR   6uoc towards Comp Sci Ma
COMP1521 19T3 Computer Systems Fundamentals     58 PS   6uoc towards Foundationa
COMP1531 19T3 Software Eng Fundamentals         67 CR   6uoc towards Foundationa
MATH1231 19T3 Mathematics 1B                    56 PS   6uoc towards Comp Sci Ma
COMP2521 20T1 Data Structures and Algorithms     - SY   6uoc towards Foundationa
SENG2021 20T1 Reqts & Design Workshop           65 CR   6uoc towards Free Electi

COMP2041 20T2 Software Construction             46 FL   fail does not count
DESN2000 20T2 Engineering Design 2              80 DN   6uoc towards Free Electi
MATH2400 20T2 Finite Mathematics                35 FL   fail does not count
MATH2859 20T2 Prob, Stats and Information       31 FL   fail does not count
COMP2511 20T3 O-O Design & Programming          32 FL   fail does not count
COMP3311 20T3 Database Systems                  75 DN   6uoc towards COMPA1 Comp
UOC = 72 so far

Remaining to complete degree:
- COMP2511 O-O Design & Programming
```

```
      – COMP3121 Algorithms & Programming Tech
        or COMP3821 Ext Algorithms&Prog Techniques
      – COMP3900 Computer Science Project
      – COMP4920 Management and Ethics
      at least 24 UOC courses from COMPA1 Computing Electives
      12 UOC of General Education
      at least 12 UOC of Free Electives



      —— so close ... if only they hadn't failed HUMS1005
      —— they could take further COMP courses, but they'd be
      ——   counted as Free Electives to satisfy the rules

      $ ./prog 5135945
      5135945 Yong, Xuanzhi
        3778 Bachelor of Science (Comp Sci)
        COMPA1 Computer Science

      Completed:
      COMP1511 17s1 Programming Fundamentals       62 PS  6uoc towards Foundationa
      HUMS1005 17s1 English Language Enhancement    41 FL   fail does not count
      MATH1081 17s1 Discrete Mathematics            54 PS  6uoc towards Comp Sci Ma
      MATH1131 17s1 Mathematics 1A                  61 PS  6uoc towards Comp Sci Ma
      COMP1531 17s2 Software Eng Fundamentals       94 HD  6uoc towards Foundationa
      COMP2521 17s2 Data Structures and Algorithms  60 PS  6uoc towards Foundationa
      INFS1603 17s2 Intro to Business Databases     55 PS  6uoc towards Free Electi
      MATH1231 17s2 Mathematics 1B                  50 PS  6uoc towards Comp Sci Ma
      COMP1521 18s1 Computer Systems Fundamentals   51 PS  6uoc towards Foundationa
      COMP3411 18s1 Artificial Intelligence         55 PS  6uoc towards COMPA1 Comp
      DIPP1112 18s1 Creating Your Career            51 PS  6uoc towards Free Electi
      COMP2041 18s2 Software Construction           70 CR  6uoc towards Free Electi
      COMP2511 18s2 O-O Design & Programming        51 PS  6uoc towards Foundationa
      ECON1101 18s2 Microeconomics 1                78 DN  6uoc towards Free Electi
      GENC3004 18s2 Personal Finance                76 DN  6uoc towards General Edu
      COMP3121 19T1 Algorithms & Programming Tech   60 PS  6uoc towards Comp Sci Ad
      COMP3311 19T1 Database Systems                68 CR  6uoc towards COMPA1 Comp
      PHYS1160 19T1 Introduction to Astronomy       86 HD  6uoc towards Free Electi
      COMP3331 19T2 Computer Networks&Applications  50 PS  6uoc towards COMPA1 Comp
      COMP9313 19T2 Big Data Management             82 DN  6uoc towards COMPA1 Comp
      COMP9417 19T2 Machine Learning & Data Mining  65 CR  6uoc towards COMPA1 Comp
      COMP3900 19T3 Computer Science Project        66 CR  6uoc towards Comp Sci Ad
      COMP4920 19T3 Management and Ethics           74 CR  6uoc towards Comp Sci Ad
      GENS1111 19T3 Big Fat Myths                   63 PS  6uoc towards General Edu
      UOC = 138 so far


      Remaining to complete degree:
      at least 6 UOC of Free Electives

      ... MORE TO COME ...
```