Homework 7 part 1: Bereket, Dagmawi, Evan, Ethan

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| Policy 1 | The role Staff\_member\_role will be assigned to each Staff Member in the Registrar’s Office. This role will have INSERT privileges on all tables. |
| Policy 2 | The role Staff\_member\_role will contain the DELETE ANY privilege. |
| Policy 3 | The role Staff\_member\_role will contain the SELECT ANY privilege. |
| Policy 4 | The role Staff\_member\_role will contain the UPDATE ANY privilege. |
| Policy 5 | A context will be created that will allow a student to query the STUDENTS table but can only see his/her records. Would use a TFRF. |
| Policy 6 | A view (instructor\_view) will be created that will return all information from the INSTRUCTORS table except for IDs. The student\_role and instructor\_role will be granted access to this view. Students will be assigned the student\_role. |
| Policy 7 | Student\_role will be granted the SELECT privilege to see information in COURSES table. |
| Policy 8 | A context will be created to allow students to query the ENROLLMENT table, but only their information will be returned. Would create a TFRF. -> **ended up using a view, student\_enrollment\_view** |
| Policy 9 | Instructor\_role will be granted SELECT ON STUDENTS privilege. |
| Policy 10 | Instructor\_role will be granted access to the instructor\_view (see Policy 6). |
| Policy 11 | Context will be create to allow the instructors to query the INSTRUCTORS table, but only their own information will be returned. Would use TFRF. |
| Policy 12 | Instructor\_role will be granted the SELECT ON COURSES privilege. |
| Policy 13 | Instructor\_role will be granted SELECT ON ENROLLMENT privilege. |
| Policy 14 | A context will be created that allow an instructor to update INSTRUCTORS table. The context would allow the instructor to update his/her own information, except for the ID and ENAME. Would create a CFRF. |
| Policy 15 | A trigger would be created to be called immediately before UPDATE on the ENROLLMENT table. The trigger would check that the instructor had taught the course that is related to the specific grade. |

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| **Grantee** | **Type** | **Privilege/Role** | **Object Schema** | **Object Name** | **Column Name** | **Grantable** | **Grantor** |
| App\_schema | User | CREATE ANY CONTEXT |  |  |  | No | SYS |
| App\_schema | User | CREATE TABLE |  |  |  | No | SYS |
| App\_schema | User | CREATE PROCEDURE |  |  |  | No | SYS |
| App\_schema | User | CREATE VIEW |  |  |  | No | SYS |
| App\_schema | User | CREATE TRIGGER |  |  |  | No | SYS |
| App\_schema | User | CREATE PACKAGE |  |  |  | No | SYS |
| Application administrator | User | SELECT ANY | App\_schema | All tables | All | Yes | SYS |
| Application administrator | User | DELETE ANY | App\_schema | All tables | All | Yes | SYS |
| Application administrator | User | UPDATE ANY | App\_schema | All tables | All | Yes | SYS |
| Application administrator | User | INSERT ANY | App\_schema | All tables | All | Yes | SYS |
| Application administrator | User | EXECUTE PACKAGE | App\_schema |  |  | No | SYS |
| Staff\_member\_role | Role | DELETE ANY | App\_schema | All tables | All | No | App\_administrator |
| Staff\_member\_role | Role | SELECT ANY | App\_schema | All tables | All | No | App\_administrator |
| Staff\_member\_role | Role | INSERT | App\_schema | All tables | All | No | App\_administrator |
| Staff\_member\_role | Role | UPDATE ANY | App\_schema | All tables | All | No | App\_administrator |
| Staff in Registrar’s Office | User | Staff\_member\_role | App\_schema | All tables | All | No | App\_administrator |
| Student\_role | Role | SELECT | App\_schema | COURSES | All | No | App\_administrator |
| Student\_role | Role | SELECT | App\_schema | Instructor\_view | Last\_name, first\_name, ename, dept | No | App\_administrator |
| Student\_role | Role | SELECT | App\_schema | STUDENTS |  | No | App\_administrator |
| Student | User | Student\_role | App\_schema | COURSES, instructor\_view |  | No | App\_administrator |
| Instructor\_role | Role | SELECT | App\_schema | STUDENTS | All | No | App\_administrator |
| Instructor\_role | Role | SELECT | App\_schema | Instructor\_view | Last\_name, first\_name, ename, dept | No | App\_administrator |
| Instructor\_role | Role | SELECT | App\_schema | COURSES | All | No | App\_administrator |
| Instructor\_role | Role | SELECT | App\_schema | ENROLLMENT | All | No | App\_administrator |
| Instructor\_role | Role | UPDATE | App\_schema | ENROLLMENT | Grade | No | App\_administrator |
| Instructor | User | Instructor\_role | App\_schema |  |  | No | App\_administrator |