**U N I V E R Z I T A O B R A N Y**

Fakulta vojenských technologií, Katedra informatiky a kybernetických operací

**ZÁPOČTOVÁ PRÁCE (ZP)**

**Analýza informačních zdrojů (IZ)**

UML modelování

Slovník kybernetické bezpečnosti

Týmová práce

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**Datum:**

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# 1. Popis úloh/modulů/struktur ze zadání ZP

**Model 1: Classification**

* Description: this model represent the evaluation of a user of a study group for a semester for a

(mutil-semester) subject as part of a study program assigned to the study group of that user.

* **Attributes**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Type** | **Description** |
| id | UUID | The unique identifier for this classification entry |
| lastchange | DateTime | Records the last time this classification was modified |
| date | DateTime | The date of the course’s evaluation |
| order | Interger | The number of evaluated attempt repeated for this course by this student |
| student\_id | UUID | A reference to the student's ID, indicating that this classification is associated with a specific student |
| semester\_id | UUID | A reference to the semester ID, linking this classification to a particular semester |
| classificationlevel | String | The evaluation for this course |

* **Associations**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Relationship type** | **Description** |
| Student Model | 1 to 1 | Each classification is linked to a specific student (represented by the student\_id field) |
| Semester Model | 1 to 1 | Each classification is linked to a specific semester (represented by the semester\_id field) |

**Model 2: Program**

* Description: Provides information about different academic programs which student(user) involved in
* **Attributes**:

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Type** | **Description** |
| id | UUID | The unique identifier for the academic program. |
| Lastchange | DateTime | The date and time of the last modification to the program details. |
| name | String | The name of the academic program in a specific language. |
| Name\_en | String | The English name of the program |
| Type\_id | UUID | A reference to a program type, indicating the category or classification of the program. |
| Group\_id | UUID | A reference to a group that this program is associated with. |

* **Associations**:

|  |  |  |
| --- | --- | --- |
| Attribute | Relationship type | Description |
| Group Model | 1 to 1 | Each academic program is associated with a group, which could represent a department or an academic division (represented by group\_id). |
| Group Subject | 1 to many | Program contains subject |

**Model 3: Subject**

* Description: this model represents a subject as part of a study program assigned to the study group.
* Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Type** | **Description** |
| id | UUID | The unique identifier for this classification entry |
| lastchange | DateTime | Records the last time this classification was modified |
| name | String | The name of the subject in native language |
| name\_en | String | English translation of the subject’s native name |
| program\_id | UUID | Reference to the associated Program |
| group\_id | UUID | Reference to the associated Group. |

* **Associations**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Relationship type** | **Description** |
| Program Model | Many to 1 | In a program there’s many different subjects |
| Group Model | Many to many | Each group can have many subjects and each subject can be studied by many groups |
| Semester Model | 1 to many | A subject can be studied for multiple semesters |

**Model 4: Semester**

* **Attributes**:

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Type** | **Description** |
| id | UUID | The unique identifier for this semester entry. |
| lastChange | DateTime | The last date and time when the semester record was modified. |
| order | Integer | Indicates the position or order of the semester, potentially within an academic program. |
| credits | Integer | The total number of credits associated with this semester. |
| Classificationtype | String | A reference to the classification type, which suggests the type or category of classification applied to the semester. |
| Subject\_id | UUID | A reference to the Subject entity, indicating that this semester is associated with a specific subject. |

* **Associations**:

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Relationship** **Type** | **Description** |
| Subject | 1 to 1 | Each semester has one subject associated with it (represented by subject\_id). |
| Classification | 1 to many | Each students can repeat a semester for a subjects |

**Model 5: User**

* Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Type** | **Description** |
| id | UUID | A unique identifier (UUID) for the user |
| name | string | The first name of the user |
| surname | string | The last name of the user |
| email | string | Theuser'semailaddress |

* **Associations**:

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Relationship** **Type** | **Description** |
| Group | 1 to 1 | Each student belongs to only 1 group |
| Classification | 1 to many | Students can have many classifications of each subject |

**Model 6: Group**

* Description: this model represent a study group that comprised of many users
* Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Type** | **Description** |
| id | UUID | The unique identifier for this classification entry |
| lastchange | DateTime | Records the last time this classification was modified |
| group\_type | String | The type of group, in this case only study group |
| memberships | List string | The list of students inside this group |

* **Associations**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Relationship type** | **Description** |
| Student Model | 1 to many | A study group have many students represented by the memberships attributes |
| Program model | 1 to 1 | A study group have a single program |
| Subject mode | Many to 1 | Many study groups can shares a single subject |

# 2. UML modelování, model 1, jeho název

Popis a výsledek modelování v prostředí EA.

# 3. UML modelování, model 2, jeho název

Popis a výsledek modelování v prostředí EA.

# 4. UML modelování, model 3 (a 4), jejich názvy

Popis a výsledek modelování v prostředí EA.

# 5. Rozvoj slovníku kybernetické bezpečnosti

Doplňte pojmy (CONCEPT) do Slovníku kybernetické bezpečnosti (Cyber Security Glossary) podle podrobného zadání. Slovník se člení na oblasti:

1. Strategické/obecné pojmy (Strategic-common concepts). STRATEG
2. Organizace, orgány, funkce (Organizations-bodies-functions) ORG-FUN
3. Chráněná aktiva (Protected assets). ASSETS
4. Hrozby a útoky – obecně (Threats and attacks-general). THR-ATT\_GEN
5. Hrozby a útoky – škodlivý SW (Threats and attacks-malware). THR-ATT\_MAL
6. Hrozby a útoky – napadení sítě (Threats and attacks-network). THR-ATT\_NET
7. Hrozby a útoky – napadení web.aplikací (Threats and attacks-web-applic). THR-ATT\_WEB
8. Kybernetická obrana - metody,postupy,návody (Cyber defence-met, proc, instr) CYB-DEF\_MET
9. Kybernetická obrana - nástroje (Cyber defence-tools) CYB-DEF\_TOOL

# 6. Závěr