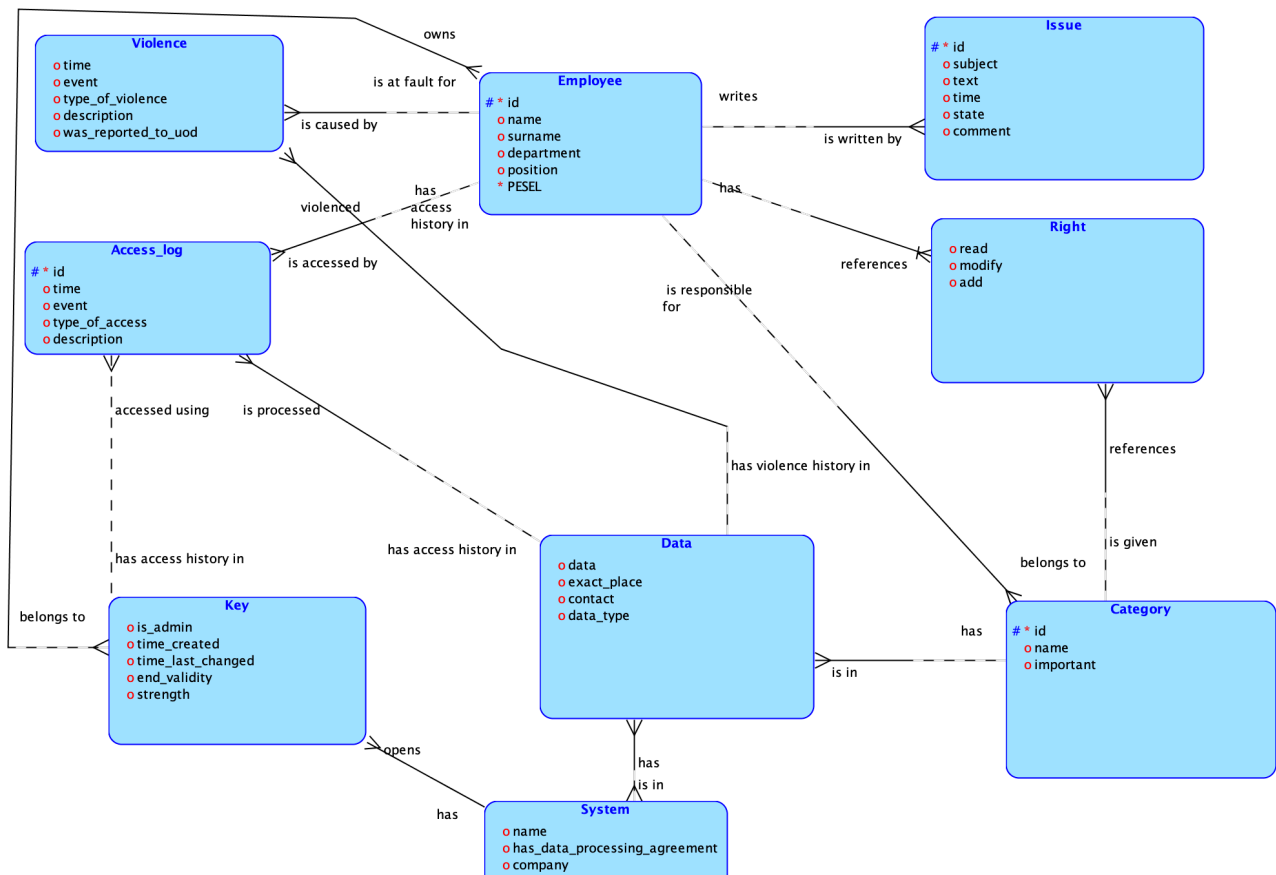


# Sprawozdanie 1

## 1. Opis zadania

Celem projektu jest stworzenie bazy danych do obsługi danych osobowych w firmie (RODO).

## 2. Model ER bazy danych



## 3. Zapytania „Create table” bazy danych Oracle

### 1. Employee

```
CREATE TABLE "WSITEK"."EMPLOYEE"  
(  
  "ID" NUMBER(*,0) NOT NULL ENABLE,  
  "NAME" VARCHAR2(32 BYTE) NOT NULL ENABLE,  
  "SURNAME" VARCHAR2(64 BYTE) NOT NULL ENABLE,  
  "DEPARTMENT" VARCHAR2(64 BYTE),  
  "POSITION" VARCHAR2(64 BYTE),  
  "PESEL" CHAR(11 BYTE) NOT NULL ENABLE,  
  PRIMARY KEY ("ID")  
)  
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS  
STORAGE(INITIAL 8192 NEXT 8192 MINEXTENTS 1 MAXEXTENTS 2147483645  
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT  
FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
```

```

TABLESPACE "II_DATA" ENABLE
) SEGMENT CREATION IMMEDIATE
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
LOGGING
STORAGE(INITIAL 8192 NEXT 8192 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT
FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "II_DATA" ;

```

## 2. Access\_log

```

CREATE TABLE "WSITEK"."ACCESS_LOG"
(
  "ID" NUMBER NOT NULL ENABLE,
  "TS" TIMESTAMP (6) NOT NULL ENABLE,
  "EVENT" VARCHAR2(32 BYTE) NOT NULL ENABLE,
  "ACCESS_TYPE" CHAR(1 BYTE) DEFAULT 'R' NOT NULL ENABLE,
  "DESCRIPTION" VARCHAR2(128 BYTE),
  "KEY_ID" NUMBER,
  "DATA_ID" NUMBER NOT NULL ENABLE,
  "EMP_ID" NUMBER NOT NULL ENABLE,
  CONSTRAINT "ACCESS_LOG_PK" PRIMARY KEY ("ID")
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 NOCOMPRESS LOGGING
TABLESPACE "II_DATA" ENABLE,
  CONSTRAINT "ACCESS_LOG_ACC_TYPE_CHK" CHECK (access_type
in('R','M','A','D')) ENABLE,
  CONSTRAINT "ACCESS_LOG_FK1" FOREIGN KEY ("EMP_ID")
REFERENCES "WSITEK"."EMPLOYEE" ("ID") ENABLE,
  CONSTRAINT "ACCESS_LOG_FK2" FOREIGN KEY ("DATA_ID")
REFERENCES "WSITEK"."DATA" ("ID") ENABLE,
  CONSTRAINT "ACCESS_LOG_FK3" FOREIGN KEY ("KEY_ID")
REFERENCES "WSITEK"."KEY" ("ID") ENABLE
) SEGMENT CREATION DEFERRED
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
LOGGING
TABLESPACE "II_DATA" ;

```

## 3. Categ

```

CREATE TABLE "WSITEK"."CATEG"
(
  "ID" NUMBER NOT NULL ENABLE,
  "NAME" VARCHAR2(64 BYTE) NOT NULL ENABLE,
  "IMPORTANT" NUMBER DEFAULT 5 NOT NULL ENABLE,
  "emp_id" NUMBER,
  CONSTRAINT "CAT_IMP_OGR" CHECK (important between 0 and 10) ENABLE,
  PRIMARY KEY ("ID")
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
NOCOMPRESS LOGGING
TABLESPACE "II_DATA" ENABLE,
  CONSTRAINT "CATEG_EMP_FK" FOREIGN KEY ("emp_id")
REFERENCES "WSITEK"."EMPLOYEE" ("ID") ENABLE
) SEGMENT CREATION DEFERRED
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
LOGGING

```

TABLESPACE "II\_DATA" ;

#### 4. Data

```
CREATE TABLE "WSITEK"."DATA"  
(  
  "ID" NUMBER NOT NULL ENABLE,  
  "DATA" VARCHAR2(128 BYTE) NOT NULL ENABLE,  
  "EXACT_PLACE" VARCHAR2(64 BYTE),  
  "CONTACT" VARCHAR2(128 BYTE),  
  "DATA_TYPE" VARCHAR2(64 BYTE) NOT NULL ENABLE,  
  "CATEG_ID" NUMBER NOT NULL ENABLE,  
  CONSTRAINT "DATA_PK" PRIMARY KEY ("ID")  
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 NOCOMPRESS LOGGING  
TABLESPACE "II_DATA" ENABLE  
) SEGMENT CREATION DEFERRED  
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP  
LOGGING  
TABLESPACE "II_DATA" ;
```

#### 5. Data\_to\_System

```
CREATE TABLE "WSITEK"."DATA_TO_SYSTEM"  
(  
  "DATA_ID" NUMBER NOT NULL ENABLE,  
  "SYSTEM_ID" NUMBER NOT NULL ENABLE,  
  CONSTRAINT "DATA_TO_SYSTEM_PK" PRIMARY KEY ("DATA_ID",  
"SYSTEM_ID")  
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 NOCOMPRESS LOGGING  
TABLESPACE "II_DATA" ENABLE,  
  CONSTRAINT "DATA_TO_SYSTEM_DATA_FK" FOREIGN KEY ("DATA_ID")  
REFERENCES "WSITEK"."DATA" ("ID") ENABLE,  
  CONSTRAINT "DATA_TO_SYSTEM_SYSTEM_FK" FOREIGN KEY ("SYSTEM_ID")  
REFERENCES "WSITEK"."SYSTEM" ("ID") ENABLE  
) SEGMENT CREATION DEFERRED  
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP  
LOGGING  
TABLESPACE "II_DATA" ;
```

#### 6. Issue

```
CREATE TABLE "WSITEK"."ISSUE"  
(  
  "ID" NUMBER NOT NULL ENABLE,  
  "SUBJECT" VARCHAR2(64 BYTE) NOT NULL ENABLE,  
  "TEXT" BLOB NOT NULL ENABLE,  
  "COMM" BLOB,  
  "STATUS" VARCHAR2(9 BYTE) DEFAULT 'Received',  
  "TS" TIMESTAMP (6) WITH TIME ZONE,  
  "TS_CHANGED" TIMESTAMP (6) WITH TIME ZONE,  
  "emp_id" NUMBER(*,0) NOT NULL ENABLE,  
  CONSTRAINT "ISSUE_ENUM_STATE" CHECK (status  
in('Received','Read','Processed','Rejected','Done')) ENABLE,
```

```

        CONSTRAINT "ISSUE_PK" PRIMARY KEY ("ID")
        USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
        STORAGE(INITIAL 8192 NEXT 8192 MINEXTENTS 1 MAXEXTENTS 2147483645
        PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT
        FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
        TABLESPACE "II_DATA" ENABLE,
        CONSTRAINT "ISSUE_EMP_FK" FOREIGN KEY ("emp_id")
        REFERENCES "WSITEK"."EMPLOYEE" ("ID") ENABLE
    ) SEGMENT CREATION IMMEDIATE
    PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
    LOGGING
    STORAGE(INITIAL 8192 NEXT 8192 MINEXTENTS 1 MAXEXTENTS 2147483645
    PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT
    FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
    TABLESPACE "II_DATA"
    LOB ("TEXT") STORE AS BASICFILE (
    TABLESPACE "II_DATA" ENABLE STORAGE IN ROW CHUNK 2048 RETENTION
    NOCACHE LOGGING
    STORAGE(INITIAL 8192 NEXT 8192 MINEXTENTS 1 MAXEXTENTS 2147483645
    PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT
    FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT))
    LOB ("COMM") STORE AS BASICFILE (
    TABLESPACE "II_DATA" ENABLE STORAGE IN ROW CHUNK 2048 RETENTION
    NOCACHE LOGGING
    STORAGE(INITIAL 8192 NEXT 8192 MINEXTENTS 1 MAXEXTENTS 2147483645
    PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT
    FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)) ;

```

## 7. Key

```

CREATE TABLE "WSITEK"."KEY"
(
    "SYSTEM_ID" NUMBER NOT NULL ENABLE,
    "DESCRIPTION" VARCHAR2(64 BYTE) NOT NULL ENABLE,
    "TS_CREATED" TIMESTAMP (6) NOT NULL ENABLE,
    "TS_CHANGED" TIMESTAMP (6) NOT NULL ENABLE,
    "END_VALIDITY" TIMESTAMP (6),
    "STRENGTH" NUMBER(*,0) DEFAULT 1 NOT NULL ENABLE,
    "ID" NUMBER NOT NULL ENABLE,
    CONSTRAINT "KEY_CHK1" CHECK (strength between 1 and 5) ENABLE,
    CONSTRAINT "KEY_PK" PRIMARY KEY ("ID")
    USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
    NOCOMPRESS LOGGING
    TABLESPACE "II_DATA" ENABLE
) SEGMENT CREATION DEFERRED
    PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
    LOGGING
    TABLESPACE "II_DATA" ;

```

## 8. Right

```

CREATE TABLE "WSITEK"."RIGHT"
(
    "emp_id" NUMBER,
    "categ_id" NUMBER,

```

```

        "R_READ" CHAR(1 BYTE) DEFAULT 'N' NOT NULL ENABLE,
        "R_MODIFY" CHAR(1 BYTE) DEFAULT 'N' NOT NULL ENABLE,
        "R_ADD" CHAR(1 BYTE) DEFAULT 'N' NOT NULL ENABLE,
        CONSTRAINT "RIGHT_CHECK_READ_YN" CHECK (r_read IN('Y', 'N')) ENABLE,
        CONSTRAINT "RIGHT_CHECK_MODIFY_YN" CHECK (r_modify IN('Y', 'N'))
ENABLE,
        CONSTRAINT "RIGHT_CHECK_ADD_YN" CHECK (r_add IN('Y', 'N')) ENABLE,
        CONSTRAINT "RIGHT_PK" PRIMARY KEY ("emp_id", "categ_id")
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
NOCOMPRESS LOGGING
TABLESPACE "II_DATA" ENABLE,
        FOREIGN KEY ("emp_id")
        REFERENCES "WSITEK"."EMPLOYEE" ("ID") ENABLE,
        CONSTRAINT "RIGHT_CATEG_FK" FOREIGN KEY ("categ_id")
        REFERENCES "WSITEK"."CATEG" ("ID") ENABLE
    ) SEGMENT CREATION DEFERRED
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
LOGGING
TABLESPACE "II_DATA" ;

```

## 9. System

```

CREATE TABLE "WSITEK"."SYSTEM"
(
    "ID" NUMBER NOT NULL ENABLE,
    "NAME" VARCHAR2(64 BYTE) NOT NULL ENABLE,
    "HAS_DATA_PROC_AGREEMENT" CHAR(1 BYTE) DEFAULT 'N' NOT NULL
ENABLE,
    "COMPANY" VARCHAR2(64 BYTE),
    CONSTRAINT "SYSTEM_PK" PRIMARY KEY ("ID")
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 NOCOMPRESS LOGGING
TABLESPACE "II_DATA" ENABLE,
    CONSTRAINT "SYSTEM_CHECK_PROC_AGR_YN" CHECK
(has_data_proc_agreement in('Y', 'N')) ENABLE
) SEGMENT CREATION DEFERRED
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
LOGGING
TABLESPACE "II_DATA" ;

```

COMMENT ON COLUMN "WSITEK"."SYSTEM"."COMPANY" IS 'Outsourcing company that administrates this personal data system';

## 10. Violence

```

CREATE TABLE "WSITEK"."VIOLENCE"
(
    "ID" NUMBER NOT NULL ENABLE,
    "TS_REPORTED" TIMESTAMP (6) NOT NULL ENABLE,
    "TS_DONE" TIMESTAMP (6),
    "EVENT" VARCHAR2(64 BYTE) NOT NULL ENABLE,
    "DESCRIPTION" VARCHAR2(256 BYTE),
    "ESTIMATED_LOSS" NUMBER,

```

```

        "WAS_REPORTED_TO_UD" CHAR(1 BYTE) DEFAULT 'N' NOT NULL ENABLE,
        "DATA_ID" NUMBER NOT NULL ENABLE,
        "EMP_ID" NUMBER NOT NULL ENABLE,
        CONSTRAINT "VIOLENCE_PK" PRIMARY KEY ("ID")
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 NOCOMPRESS LOGGING
TABLESPACE "II_DATA" ENABLE,
        CONSTRAINT "VIOLENCE_CHK1" CHECK (was_reported_to_ud in ('Y', 'N'))
ENABLE,
        CONSTRAINT "VIOLENCE_EMP_FK" FOREIGN KEY ("EMP_ID")
        REFERENCES "WSITEK"."EMPLOYEE" ("ID") ENABLE,
        CONSTRAINT "VIOLENCE_DATA_FK" FOREIGN KEY ("DATA_ID")
        REFERENCES "WSITEK"."DATA" ("ID") ENABLE
) SEGMENT CREATION DEFERRED
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
LOGGING
TABLESPACE "II_DATA" ;

```

## 11. Employee\_to\_key

```

CREATE TABLE "WSITEK"."EMPLOYEE_TO_KEY"
(
    "EMP_ID" NUMBER NOT NULL ENABLE,
    "KEY_ID" NUMBER NOT NULL ENABLE,
    CONSTRAINT "EMPLOYEE_TO_KEY_PK" PRIMARY KEY ("EMP_ID", "KEY_ID")
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 NOCOMPRESS LOGGING
TABLESPACE "II_DATA" ENABLE,
    CONSTRAINT "EMPLOYEE_TO_KEY_KEY_FK" FOREIGN KEY ("KEY_ID")
    REFERENCES "WSITEK"."KEY" ("ID") ENABLE,
    CONSTRAINT "EMPLOYEE_TO_KEY_EMP_FK" FOREIGN KEY ("EMP_ID")
    REFERENCES "WSITEK"."EMPLOYEE" ("ID") ENABLE
) SEGMENT CREATION DEFERRED
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 COMPRESS FOR OLTP
LOGGING
TABLESPACE "II_DATA" ;

```