

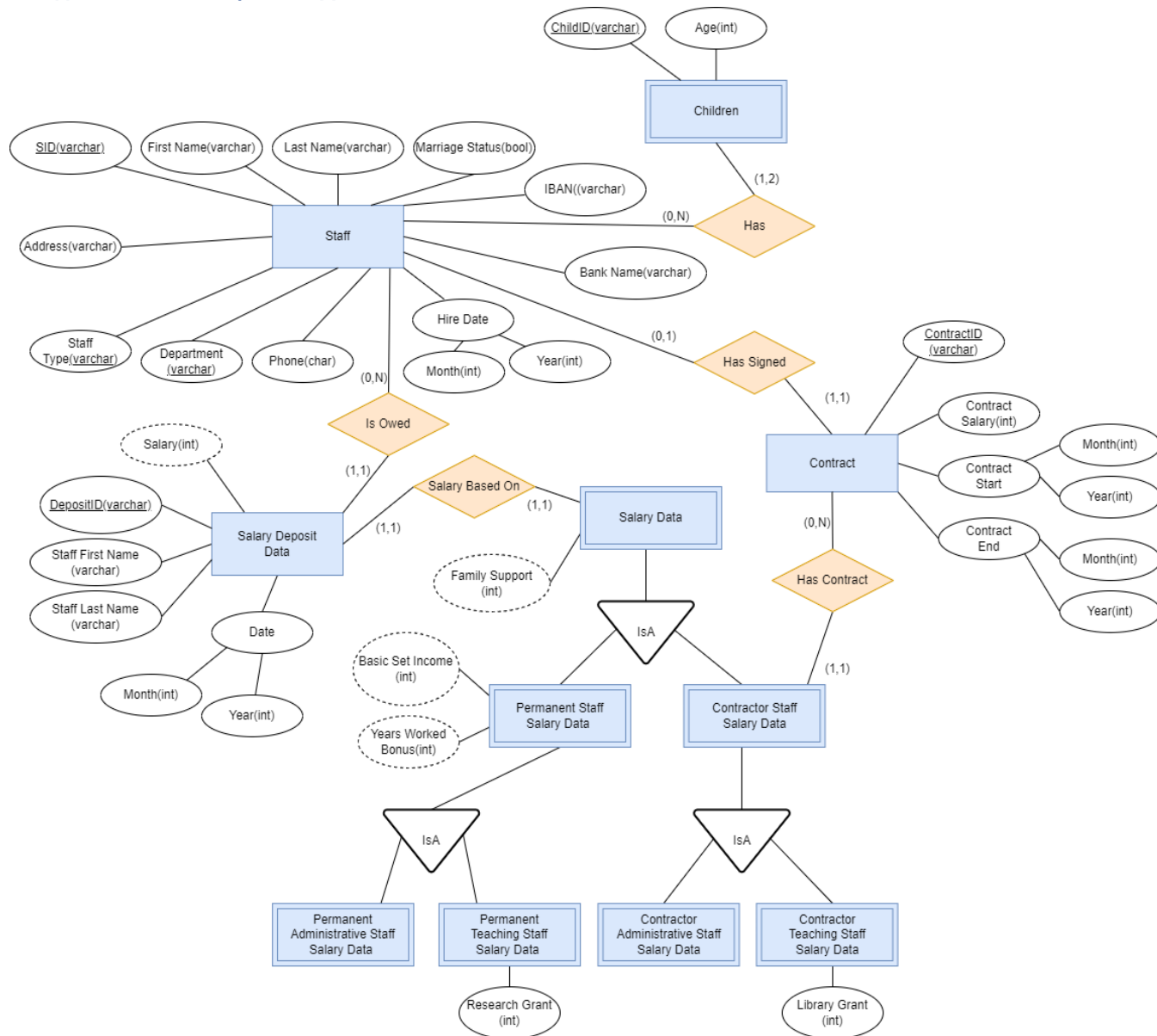
HY-360 Project 2022-2023

Κωνσταντίνος Δελής csd4623

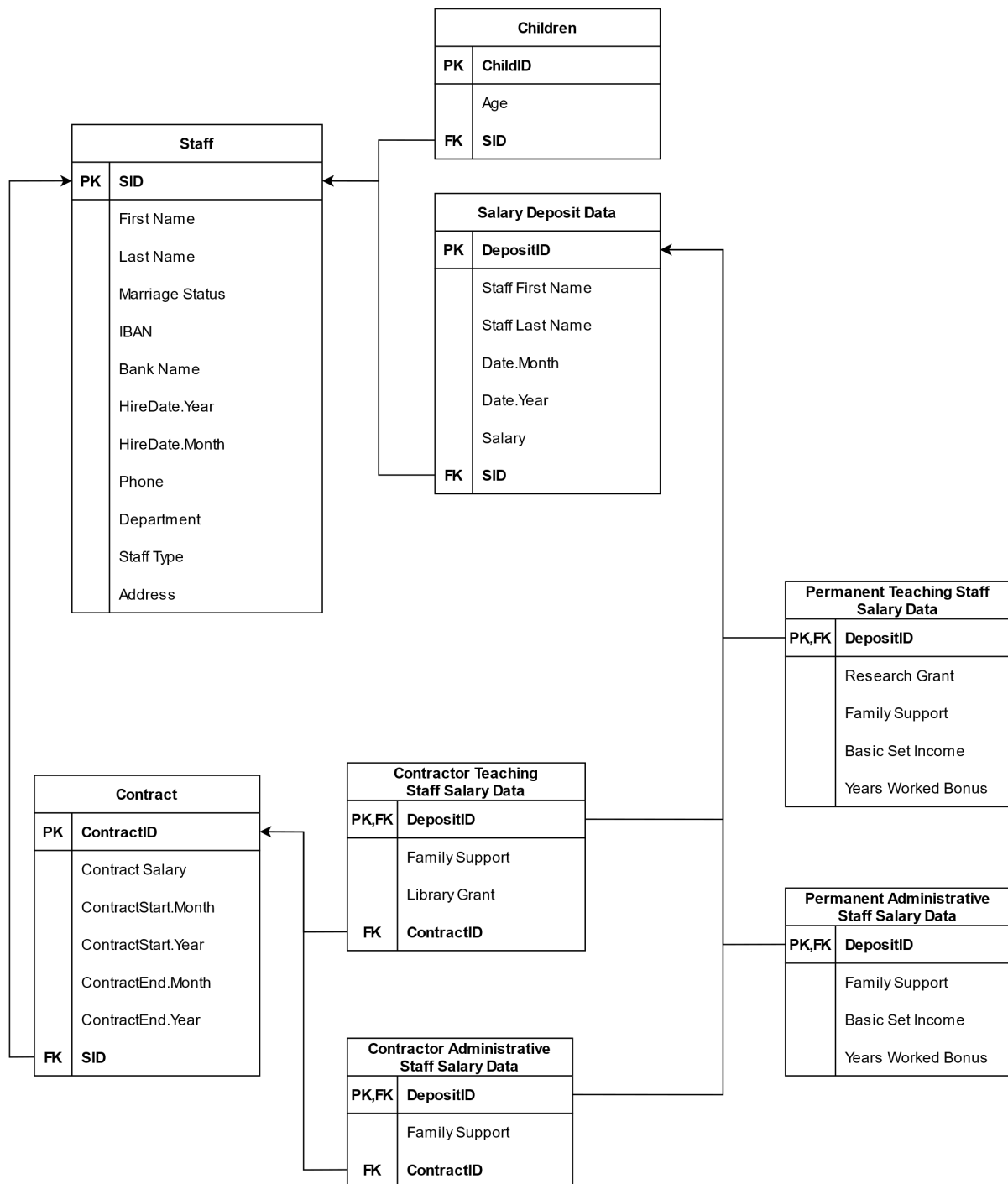
Δημήτρης Κλειναυτάκης csd4807

Κωνσταντίνος Παπαδόπουλος csd4713

Διάγραμμα οντοτήτων-σχέσεων:



Μετάφραση του προηγούμενου διαγράμματος οντοτήτων-σχέσεων σας σε σχεσιακό μοντέλο:



FK: Foreign Key, PK: Primary Key

Μετατροπή σε 3NF:

Μπορούμε να παρατηρήσουμε πως σε όλες τις οντότητες όλα τα γνωρίσματα εξαρτώνται από το πλήρες κλειδί, συνεπώς το μοντέλο είναι ήδη σε μορφή Boyce-Codd, άρα θα βρίσκεται και σε Τρίτη κανονική μορφή.

(Υπάρχουν ορισμένα derived attributes όπως για παράδειγμα το «salary», τα οποία υπολογίζονται μέσω γνωρισμάτων άλλων οντοτήτων, ωστόσο η 3NF μορφή περιορίζεται στις εξαρτήσεις μεταξύ γνωρισμάτων μιας οντότητας και τα derived γνωρίσματα δεν την επηρεάζουν)

Files:

TablesCreate.sql: SQL to create all needed Tables

Views.sql: SQL to create all needed Views used for the queries

“5 τουλάχιστον εισαγωγές δεδομένων για κάθε πίνακα”: Μπορείτε να φτιάξετε όσα random entries επιθυμείτε μέσω του button “Create Staff Entries”

Επεξήγηση Views:

Τα views του project:

1) Salary totals:

CREATE VIEW SalaryTotals as

Select st.sid , st.first_name , st.last_name, st.marriage_status , st.iban, st.bank_name,

st.hire_year , st.hire_month, st.phone, st.department , st.staff_type, st.address,

sal.date_month , sal.date_year , sal.salary FROM STAFF as st

INNER JOIN

SALARY_DEPOSIT_DATA as sal ON st.sid = sal.sid

Κάνουμε inner join τα staff και deposit salary. Με αυτό το view μπορούμε να έχουμε συνολικές πληροφορίες για τη μισθοδοσία των υπαλλήλων (χωρίς λεπτομερείες για τα επιδόματα)

2) Contractor Admin Salary:

CREATE VIEW ContractorAdminSalaryTotals as

```

Select st.sid , st.first_name , st.last_name, st.marriage_status , st.iban, st.bank_name,
st.hire_year , st.hire_month, st.phone, st.department , st.staff_type, st.address,
sal.date_month , sal.date_year , sal.salary as Total_Salary, con.contract_salary, casal.family_support
FROM STAFF as st
INNER JOIN SALARY_DEPOSIT_DATA as sal ON st.sid = sal.sid
INNER JOIN CONTRACTOR_ADMIN_SD as casal ON sal.depositid = casal.depositid
INNER JOIN CONTRACT as con On st.sid = con.sid
where st.department='Administrator' and st.staff_type = 'Contractor'

```

Κάνουμε inner join τα STAFF , SALARY_DEPOSIT_DATA , CONTRACTOR_ADMIN_SD , CONTRACT . Με αυτο το view μπορούμε να έχουμε συνολικές πληροφορίες για τη μισθοδοσία των Contractor Admin και λεπτομερείες για τα επιδοματα.

3)Permanent Admin Salary:

```

CREATE VIEW PermanentAdminSalaryTotals as
Select st.sid , st.first_name , st.last_name, st.marriage_status , st.iban, st.bank_name,
st.hire_year , st.hire_month, st.phone, st.department , st.staff_type, st.address,
sal.date_month , sal.date_year , sal.salary as Total_Salary,
pasal.basic_set_income , pasal.family_support , pasal.years_worked_bonus
FROM STAFF as st
INNER JOIN SALARY_DEPOSIT_DATA as sal ON st.sid = sal.sid
INNER JOIN PERMANENT_ADMIN_SD as pasal ON sal.depositid = pasal.depositid
where st.department='Administrator' and st.staff_type = 'Permanent'

Κάνουμε inner join τα STAFF , SALARY_DEPOSIT_DATA , PERMANENT_ADMIN_SD . Με αυτο το view
μπορούμε να έχουμε συνολικές πληροφορίες για τη μισθοδοσία των Permanent Admin και
λεπτομερείες για τα επιδοματα.

```

4) Contractor Teaching Salary:

```

CREATE VIEW ContractorTeachingSalaryTotals as
Select st.sid , st.first_name , st.last_name, st.marriage_status , st.iban, st.bank_name,
st.hire_year , st.hire_month, st.phone, st.department , st.staff_type, st.address,

```

```

sal.date_month , sal.date_year , sal.salary as Total_Salary, con.contract_salary,
ctsal.family_support , ctsal.library_grant
FROM STAFF as st
INNER JOIN SALARY_DEPOSIT_DATA as sal ON st.sid = sal.sid
INNER JOIN CONTRACTOR_TEACHING_SD as ctsal ON sal.depositid = ctsal.depositid
INNER JOIN CONTRACT as con On st.sid = con.sid
where st.department='Teaching' and st.staff_type = 'Contractor'

```

Κάνουμε inner join τα STAFF , SALARY_DEPOSIT_DATA ,CONTRACTOR_TEACHING_SD ,CONTRACT .
Με αυτο το view μπορούμε να έχουμε συνολικες πληροφορίες για τη μισθοδοσια των
Contractor Teaching και λεπτομερειες για τα επιδοματα.

5) Permanent Teaching Salary:

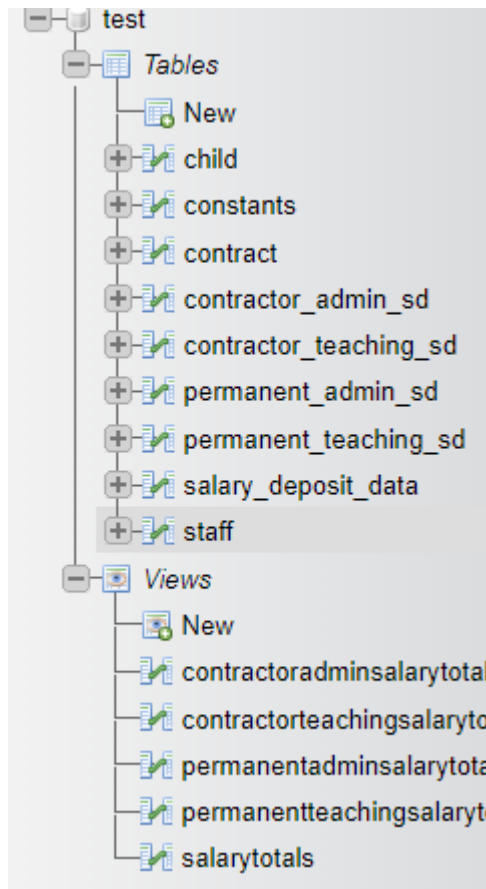
```

CREATE VIEW PermanentTeachingSalaryTotals as
Select st.sid , st.first_name , st.last_name, st.marriage_status , st.iban, st.bank_name,
st.hire_year , st.hire_month, st.phone, st.department , st.staff_type, st.address,
sal.date_month , sal.date_year , sal.salary as Total_Salary,
ptsal.basic_set_income, ptsal.family_support , ptsal.research_grant , ptsal.years_worked_bonus
FROM STAFF as st
INNER JOIN SALARY_DEPOSIT_DATA as sal
ON st.sid = sal.sid
INNER JOIN PERMANENT_TEACHING_SD as ptsal
ON sal.depositid = ptsal.depositid
where st.department='Teaching' and st.staff_type = 'Permanent'

```

Κάνουμε inner join τα STAFF , SALARY_DEPOSIT_DATA ,PERMANENT_TEACHING_SD . Με αυτο το
view μπορούμε να έχουμε συνολικες πληροφορίες για τη μισθοδοσια των Permanent Teaching
και λεπτομερειες για τα επιδοματα.

Screenshots απο την λειτουργία της βάσης:



				sid	first_name	last_name	marriage_status	iban	bank_name	hire_year	hire_month	phone	department	staff_type	address
<input type="checkbox"/>	Edit	4 Copy	Delete	ID-1	Ioanna	Nikolopoulou		0 GR4844123130010648578490939	PIREOS BANK	2021	2	6940649712	Administrator	Contractor	Komarou 46
Edit	4 Copy	Delete	ID-10	Georgios	Gazis		1 GR9633890063351624627835433	ATTICA BANK	2019	2	6949589086	Teaching	Permanent	Katzimixialth Giannari 39	
Edit	4 Copy	Delete	ID-100	Tatiana	Rokou		1 GR3546684781144522459820227	NATIONAL BANK OF GREECE	2017	6	6942718143	Teaching	Permanent	Achropolis 38	
Edit	4 Copy	Delete	ID-101	Artemis	Papazoglou		0 GR595202140875199689945741	PIREOS BANK	2019	12	6945071225	Administrator	Permanent	Chanlon 46	
Edit	4 Copy	Delete	ID-102	Dimitra	Bitsani		1 GR3007432968685289753350175	EUROBANK	2022	4	6949132960	Teaching	Contractor	Kapetanissas Marigos 32	
Edit	4 Copy	Delete	ID-103	Dionisis	Dedes		1 GR7593563414457118638306023	EUROBANK	2022	3	6947970187	Administrator	Contractor	Dikaionis 48	
Edit	4 Copy	Delete	ID-104	Panagiotla	Vamvaka		1 GR4021508541794964581626099	ATTICA BANK	2011	4	6946245609	Teaching	Permanent	Chanion 10	
Edit	4 Copy	Delete	ID-105	Andreas	Delas		1 GR346364431219689755615595	PIREOS BANK	2022	1	6944850853	Administrator	Contractor	Nik. Plastria 28	
Edit	4 Copy	Delete	ID-106	Lazaros	Rouvass		1 GR2563919798476121831117700	PIREOS BANK	2021	2	6949536173	Administrator	Contractor	Idomeneos 11	
Edit	4 Copy	Delete	ID-107	Georgios	Anastasiou		1 GR625806287982605010073251	EUROBANK	2020	10	6940238317	Administrator	Permanent	Lasithiou 46	
Edit	4 Copy	Delete	ID-108	Dimitra	Gazi		0 GR080672032109947291778520	PIREOS BANK	2021	5	6943274639	Administrator	Contractor	Megalou Aleksandrou 19	
Edit	4 Copy	Delete	ID-109	Zoi	Papazoglou		1 GR825527483742041065504447	NATIONAL BANK OF GREECE	2022	6	6949837081	Administrator	Contractor	Vizantion 45	
Edit	4 Copy	Delete	ID-11	Lampros	Georgakopoulos		1 GR036336554327975013842529	PIREOS BANK	2014	10	6942193890	Administrator	Permanent	Vizantiou 21	
Edit	4 Copy	Delete	ID-110	Athanasia	Papadopoulou		0 GR5243452975484987983820422	ALPHA BANK	2020	3	6941778079	Teaching	Permanent	Idomeneos 37	
Edit	4 Copy	Delete	ID-111	Aggeliki	Gazi		0 GR8190213985194180189357390	ATTICA BANK	2018	12	6948936080	Teaching	Permanent	Kapetanissas Marigos 8	
Edit	4 Copy	Delete	ID-112	Dionisis	Pardas		1 GR6369114171769019526714343	CITIBANK EUROPE PLC	2016	8	6946956321	Administrator	Permanent	Lasithiou 31	
Edit	4 Copy	Delete	ID-113	Georgia	Papazoglou		0 GR499901008661633571367353	EUROBANK	2022	3	6949069422	Teaching	Contractor	Komarou 38	
Edit	4 Copy	Delete	ID-114	Eleni	Vamvakla		0 GR090111247212224710050785	PIREOS BANK	2018	5	6947516499	Administrator	Permanent	Giannikou 38	
Edit	4 Copy	Delete	ID-115	Miliadis	Nikolopoulos		1 GR666074462335521956980742	CITIBANK EUROPE PLC	2022	5	6940781554	Administrator	Contractor	Giannikou 42	
Edit	4 Copy	Delete	ID-116	Lampros	Polikronopoulos		0 GR1314199421986438497690412	HSBC	2022	3	6941900766	Administrator	Contractor	Dikaionissis 49	
Edit	4 Copy	Delete	ID-117	Tatiana	Athanasiadou		1 GR8999758201815470117128097	PIREOS BANK	2022	5	6942547920	Teaching	Contractor	Evans 24	
Edit	4 Copy	Delete	ID-118	Loykia	Vekiri		1 GR4413159312286746770342275	PIREOS BANK	2019	5	6947069633	Administrator	Permanent	Komarou 12	
Edit	4 Copy	Delete	ID-119	Panagiotis	Mpitsanis		0 GR5136699744694363480924826	ATTICA BANK	2021	5	6940936749	Administrator	Contractor	Vizantion 40	
Edit	4 Copy	Delete	ID-112	Artemis	Euthimiu		1 GR105239927186348941256222	ATTICA BANK	2022	2	6949039775	Teaching	Contractor	Lasithiou 32	

Database Project hy360

Hire Employee	Drop All Tables	Execute Queries
Edit Employee	Create DB Structure	Payroll Changes
Fire Employee	Create Stuff Entries	Staff Payroll
Pay All Staff	Payroll	Payroll Totals
Change Salary	Payroll Statistics	About

Hire Employee

sid

first name last name

department

staff type

start date (Month / Year)

address

phone

IBAN

bank name

☐ married number of childr...

children's ages (comma seperated)

Edit employee

sid

Fetch Data

first name

last name

start date (Month / Year)

address

phone

IBAN

bank name

☐ married

department

Administrator

Teaching

Update

Change Salary Constants

Family Support Percentage

5

Years Worked Percentage

15

Basic Salary Admin

2000

Basic Salary Teaching

3000

Research Grant

1000

Library Grant

500

Update

Payroll

Month Year
1 2023

All Staff

Month In Year
All Years

Staff Type	Permanent
Address	Thanasi Skordalou 46
Date	1/2023
Salary	2900
SID	ID-8
First Name	Antonis
Last Name	Rokos
Is Marriage	0
IBAN	GR8373474794578839344383337
Bank Name	PIREOS BANK
Hire Date	2/2022

OK

Query Execution

SELECT * FROM STAFF

Submit

SID	ID-9
First Name	Odysseas
Last Name	Rokos
Is Marriage	1
IBAN	GR3072932624010348142538579
Bank Name	ATTICA BANK
Hire Date	8/2019
Phone Number	6946080054
Department	Administrator
Staff Type	Permanent
Address	Romanou 17

OK

Staff Payroll

Month

Year

1

2023

Month In Year

ID-1

All Years

SID	ID-1
First Name	Ioanna
Last Name	Nikolopoulou
Is Marriage	0
IBAN	GR4844123130810648578490939
Bank Name	PIREOS BANK
Hire Date	2/2021

OK