

Зачетная работа

Сивоконев Даниил Геннадьевич, С21-712

Вариант 4

-- №1

```
CREATE TABLE people(  
    id integer PRIMARY KEY,  
    first_name varchar,  
    last_name varchar,  
    birthday date,  
    amount numeric  
);  
  
CREATE TABLE people_log(  
    person_id integer REFERENCES people (id),  
    operation_date timestamp,  
    sum numeric  
);
```

```
INSERT INTO people VALUES  
(1,'Владислав','Горин','19.10.2003',400),  
(2,'Олег','Невздоров','13.02.2002',2333),  
(3,'Юлия','Аркадьева','23.05.1995',2303),  
(4,'Олеся','Мосина','28.08.1999',1202),  
(5,'Петр','Рокин','10.04.2001',244);
```

```
INSERT INTO people_log VALUES  
(3,'21.12.2022 16:39',2340),  
(1,'18.04.2022 13:30',29220),  
(2,'10.01.2021 19:00',25000),
```

```
(4,'17.10.2022 14:00',5000),  
(4,'30.10.2022 14:00',5000),  
(1,'02.04.2022 09:00',15000),  
(5,'20.11.2022 13:00', -2000),  
(2,'13.12.2022 11:00', -4200),  
(1,'15.10.2022 12:00', -1000),  
(3,'10.11.2022 10:00', -500);
```

-- №2

```
create or replace procedure statement_of_acount (begin_date date, end_date date)  
as $$
```

```
declare
```

```
    attr people_log%ROWTYPE;
```

```
    pos_sum CURSOR FOR SELECT * FROM people_log WHERE sum>=0  
ORDER BY sum DESC LIMIT 3 ;
```

```
    neg_sum CURSOR FOR SELECT * FROM people_log WHERE sum<0  
ORDER BY sum DESC LIMIT 3;
```

```
    all_op CURSOR FOR SELECT * FROM people_log;
```

```
    kol int;
```

```
    num numeric;
```

```
begin
```

```
    kol:=0;
```

```
    OPEN pos_sum;
```

```
    LOOP
```

```
        FETCH pos_sum INTO attr;
```

```
        IF NOT FOUND THEN EXIT;
```

```
    END IF;
```

```
        IF (begin_date, end_date) OVERLAPS (attr.operation_date,  
attr.operation_date) THEN
```

```
            kol:=kol+1;
```

```

    RAISE INFO 'Операция с положительной суммой : % %',
    attr.operation_date,
    attr.sum;
END IF;
END LOOP;
CLOSE pos_sum;

IF (kol=0) THEN RAISE INFO 'Операций с положительной суммой в
данный промежуток нет';
END IF;

kol:=0;
OPEN neg_sum;
LOOP
    FETCH neg_sum INTO attr;
    IF NOT FOUND THEN EXIT;
END IF;

IF (begin_date, end_date) OVERLAPS (attr.operation_date,
attr.operation_date) THEN
    kol:=kol+1;
    RAISE INFO 'Операция с отрицательной суммой : % %',
    attr.operation_date,
    attr.sum;
END IF;
END LOOP;
CLOSE neg_sum;

IF (kol=0) THEN RAISE INFO 'Операций с отрицательной суммой в
данный промежуток нет';
END IF;

kol:=0;

```

```

num:=0;
OPEN all_op;
LOOP
FETCH all_op INTO attr;
IF NOT FOUND THEN EXIT;
END IF;

IF (begin_date, end_date) OVERLAPS (attr.operation_date,
attr.operation_date) THEN
kol:=kol+1;
num:=num+attr.sum;
END IF;
END LOOP;

IF (kol>0) THEN
RAISE INFO 'Общее число операций % и среднее значение суммы %',
kol,
trunc(num/kol,2);
ELSE
RAISE INFO 'Операций в данный промежуток времени нет';
END IF;
end
$$ language plpgsql;

call statement_of_account('01-01-2022','31-12-2022');

-- №3

CREATE OR REPLACE PROCEDURE account_operation(new_id integer,
new_sum numeric) AS $$
BEGIN

```

```
UPDATE people SET amount=amount+new_sum where people.id = new_id;  
INSERT INTO people_log VALUES (new_id, now(), new_sum);  
END
```

```
$$ LANGUAGE plpgsql;
```

```
call account_operation(5, 1000);
```

```
select * from people;
```