



# Using student Marks Database

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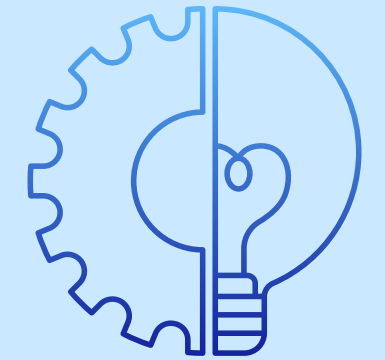
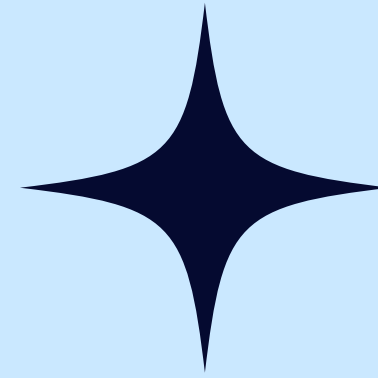
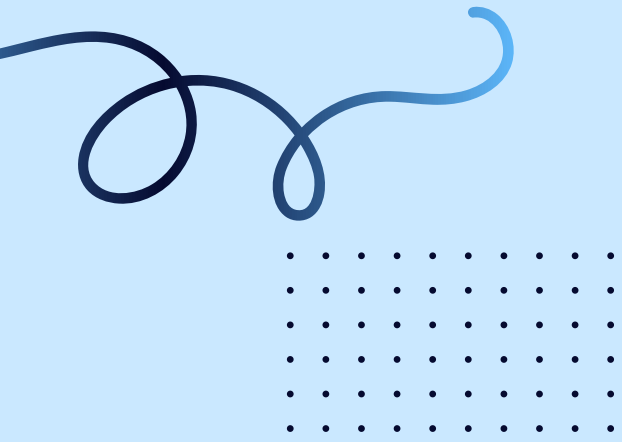
# Our project about student databases and use

Triggers can be defined on the table, view, schema, or database with which the event is associated.

## Benefits of Triggers

Generating some derived column values automatically Enforcing referential integrity  
Event logging and storing information on table access Auditing  
Synchronous replication of tables Imposing security authorizations Preventing invalid transactions



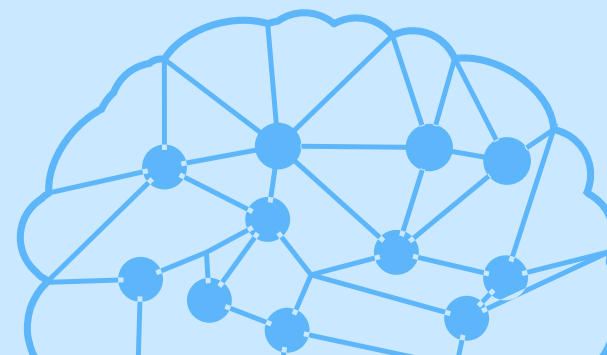


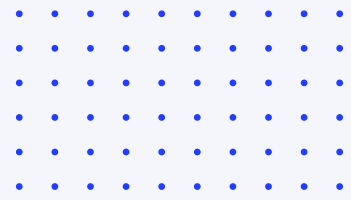
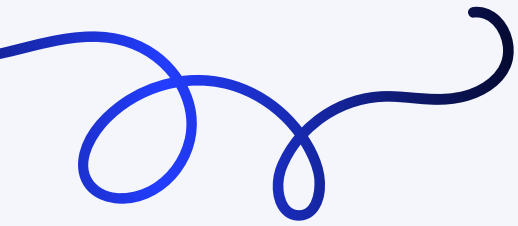
```
create table std (id int primary key,n_name
varchar2(20),address varchar2(20),c_level
number) ;
insert into std values (431,'Bushra','Bisha',3)
insert into std values (432,'Razaan','Bisha',2)
insert into std values (433,'Rahaf','Bisha',6)
insert into std values (434,'Amal','Bisha',7)
select * from std
```

ID	N_NAME	ADDRESS	C_LEVEL
432	Razaan	Bisha	2
433	Rahaf	Bisha	6
431	Bushra	Bisha	3
434	Amal	Bisha	7

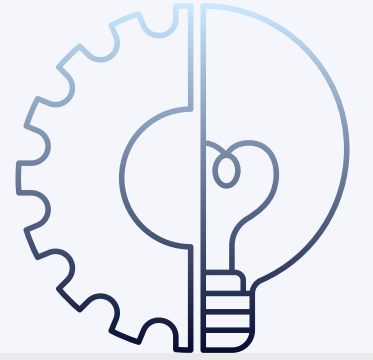
Download CSV

4 rows selected.





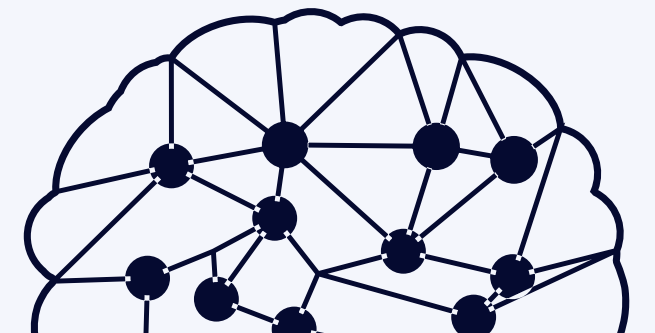
```
create table subjects ( SCode varchar(10)
    primary key,sname varchar2(20));
insert into subjects values ('CENG-121','
    Digital logic')
insert into subjects values ('CSCE-102','
    programming')
insert into subjects values (' CSCE-
    121','Discrete Structures')
insert into subjects values (' MATH-101','
    CalculusI')
select * from subjects
```

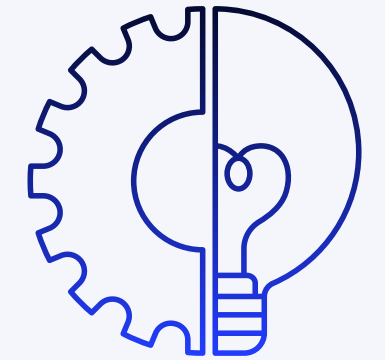
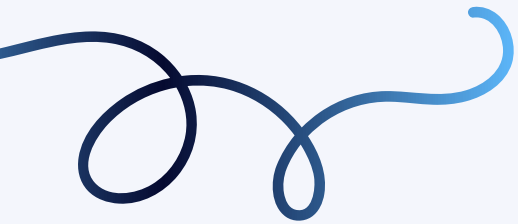


SCODE	SNAME
CENG-121	Digital logic
CSCE-121	Discrete Structures
MATH-101	CalculusI
CSCE-102	programming

Download CSV

4 rows selected.





```
create table mark (id number ,foreign
key(id)references std(id),
SCode varchar(10),foreign
key(SCode)references
subjects(SCode),marks number);
insert into mark values (431,'CENG-
121',80)
insert into mark values (432,' MATH-
101',94)
insert into mark values (433,' CSCE-
121',67)
insert into mark values (434,'CSCE-
102',96)
```

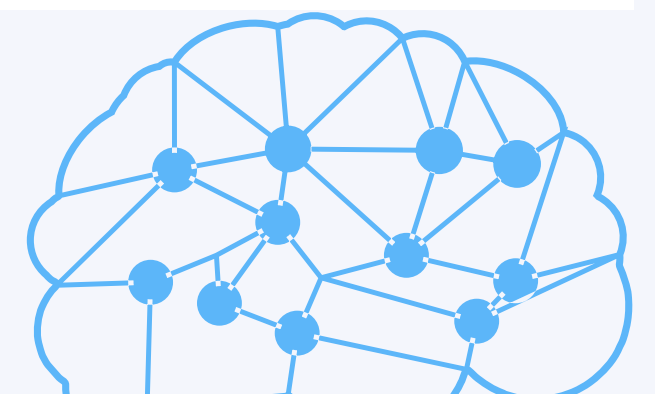
```
select * from mark
```



ID	SCODE	MARKS
431	CENG-121	80
433	CSCE-121	67
434	CSCE-102	96
432	MATH-101	94

[Download CSV](#)

4 rows selected.



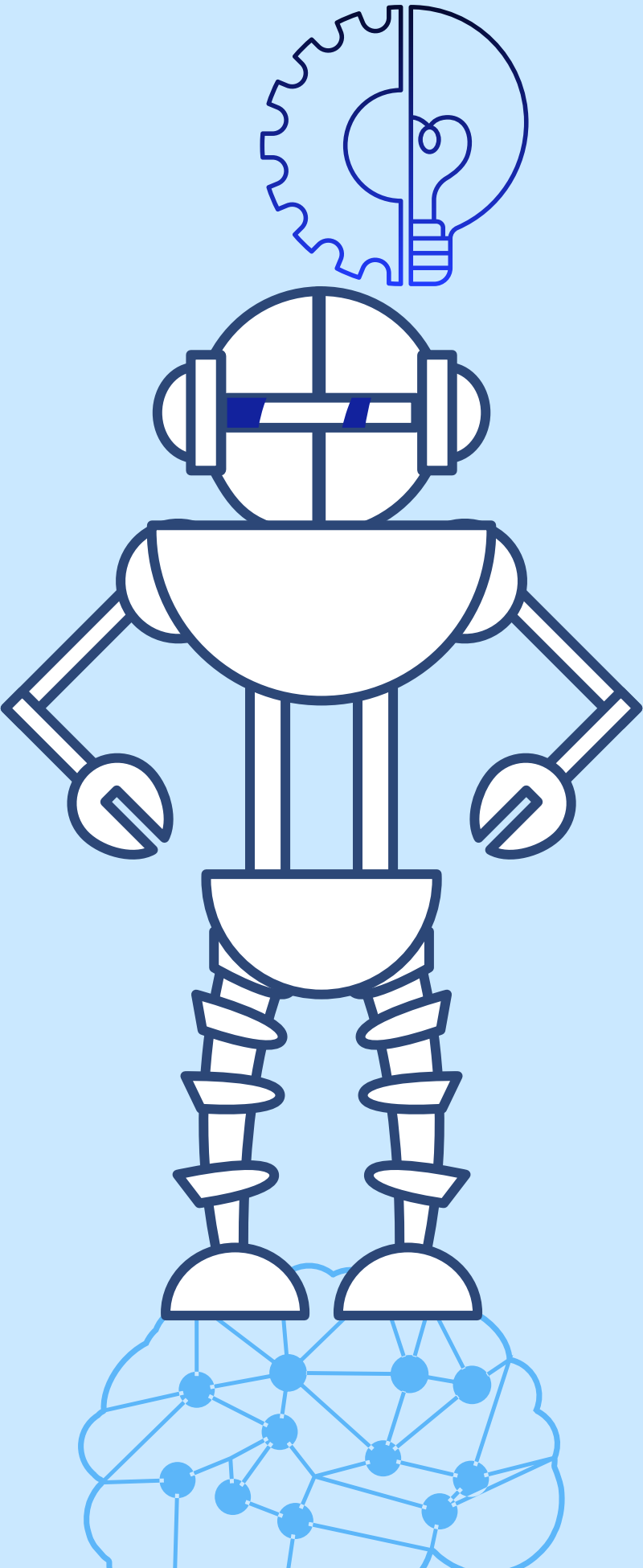
SQL Worksheet

ClearFindActionsSaveRun

```
23 CREATE OR REPLACE TRIGGER CheckAdvance
24 BEFORE INSERT OR UPDATE OF marks on mark FOR EACH ROW
25
26 BEGIN
27
28     IF (:new.marks < 10
29         OR :new.marks > 100)
30
31     THEN
32         raise_application_error(-20000, ' The avarage is greater than ten and less than or equal to one hundred. ');
33     END IF ;
34 END;
35 /
36 insert into mark values (431,'CSCE-102',6)
37 insert into mark values (432,'CSCE-121',350)
38 insert into mark values (432,'CSCE-121',90)
39
40
41
42
```

Trigger created.

CREATE OR REPLACE TRIGGER CheckAdvance  
BEFORE INSERT OR UPDATE OF marks on mark FOR EACH ROW  
BEGIN  
IF (:new.marks < 10  
OR :new.marks > 100)  
THEN  
raise\_application\_error(-20000, ' The avarage is greater than ten and less than or equal to one hundred. ');  
END IF ;  
END;  
/



```
35 /
36 insert into mark values (431,'CSCE-102',6)
37 insert into mark values (432,'CSCE-121',350)
38 insert into mark values (432,'CSCE-121',90)
39
40
41
42
```

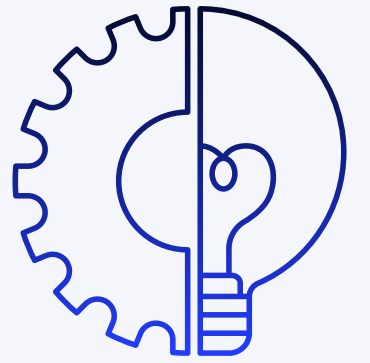
ORA-20000: The avarage is greater than ten and less than or equal to one hundred. ORA-06512: at "SQL\_TZQABPCHEVORBODIKWUYQXUCA.CHECKADVANC  
ORA-06512: at "SYS.DBMS\_SQL", line 1721

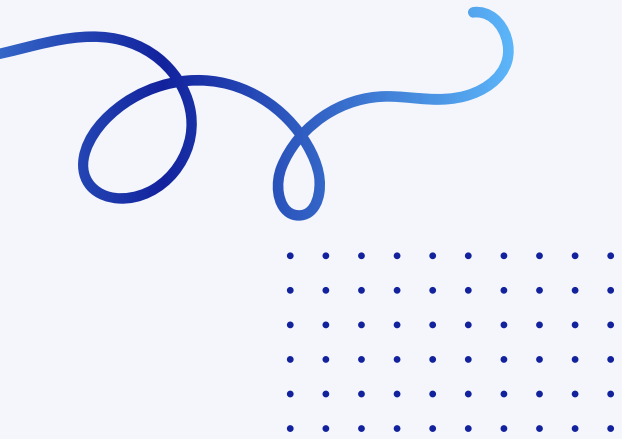
```
35 /
36 insert into mark values (431,'CSCE-102',6)
37 insert into mark values (432,'CSCE-121',350)
38 insert into mark values (432,'CSCE-121',90)
39
40
41
42
```

ORA-20000: The avarage is greater than ten and less than or equal to one hundred. ORA-06512: at "SQL\_TZQABPCHEVORBODIKWU  
ORA-06512: at "SYS.DBMS\_SQL", line 1721

```
38 insert into mark values (433,' CSCE-121',87)
39
40
41
42
```

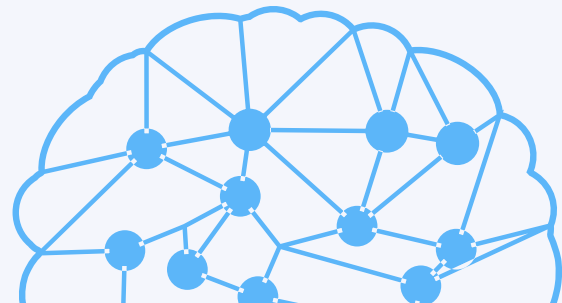
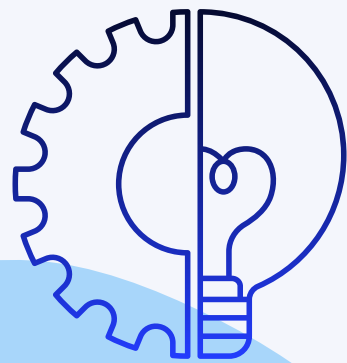
1 row(s) inserted.



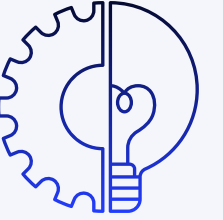


ID	SCODE	MARKS
431	CENG-121	80
433	CSCE-121	67
434	CSCE-102	96
432	MATH-101	94
433	CSCE-121	87

Download CSV  
5 rows selected.







**Thank You**

