SQL ISLAND GAME

**It seems there are a few people living in these villages. How can I see a list of all inhabitants?**

SELECT \* FROM INHABITANT;

Table

Description automatically generated

### Man! I'm hungry. I will go and find a butcher to ask for some free sausages.

### SELECT \* FROM inhabitant

### WHERE job = 'butcher'

### Table Description automatically generated

### Thank you, Edward! Okay, let's see who is friendly on this island...

SELECT \* FROM INHABITANT WHERE state ='friendly'

Table

Description automatically generated

### There is no way around getting a sword for myself. I will now try to find a friendly weaponsmith to forge me one. (Hint: You can combine predicates in the WHERE clause with AND

SELECT \* FROM INHABITANT WHERE state ='friendly' AND job = 'weaponsmith'

Graphical user interface, table

Description automatically generated with medium confidence

**Oh, that does not look good. Maybe other friendly smiths can help you out, e.g. a blacksmith. Try out: job LIKE '%smith' to find all inhabitants whose job ends with 'smith' (% is a wildcard for any number of characters).**

SELECT \* FROM INHABITANT

WHERE state ='friendly' AND job LIKE '%smith'Table

Description automatically generated

### Hi stranger! Where are you going? I'm Paul, I'm the major of Monkeycity. I will go ahead and register you as a citizen.

INSERT INTO inhabitant (name, villageid, gender, job, gold, state) VALUES ('Stranger', 1, '?', '?', 0, '?')

### No need to call me stranger! What's my personid? (Hint: In former queries, the \* stands for: all columns. Instead of the star, you can also address one or more columns (seperated by a comma) and you will only get the columns you need.)

SELECT personid

FROM INHABITANT

WHERE name = 'Stranger'

A picture containing text

Description automatically generated

### Hi Ernest! How much is a sword? I can offer to make you a sword for 150 gold. That's the cheapest you will find! How much gold do you have?

SELECT gold FROM INHABITANT WHERE name = 'Stranger'

A picture containing text

Description automatically generated

**Damn! No mon, no fun. There has to be another option to earn gold other than going to work. Maybe I could collect ownerless items and sell them! Can I make a list of all items that don’t belong to anyone? (Hint: You can recognize ownerless items by: WHERE owner IS NULL)**

SELECT \* FROM ITEM WHERE owner IS NULL

Graphical user interface

Description automatically generated with medium confidence

### Yay, a coffee cup. Let's collect it!

### Do you know a trick how to collect all the ownerless items?

A screenshot of a computer

Description automatically generated with medium confidence

### Now list all of the items I have!

### SELECT \*

### FROM ITEM

### WHERE owner = 20

### Table Description automatically generated

### Find a friendly inhabitant who is either a dealer or a merchant. Maybe they want to buy some of my items. (Hint: When you use both AND and OR, don't forget to put brackets correctly!)

SELECT \* FROM INHABITANT WHERE state = ‘friendly’

AND job = ‘dealer’ OR job = ‘merchant

Graphical user interface, application, table

Description automatically generated

### I'd like to get the ring and the teapot. The rest is nothing but scrap. Please give me the two items. My personid is 15.

UPDATE item

SET owner = 15

WHERE item = 'ring'

OR item = 'teapot'

### Unfortunately, that's not enough gold to buy a sword. Seems like I do have to work after all. Maybe it's not a bad idea to change my name from Stranger to my real name before I will apply for a job.

UPDATE inhabitant

SET name = 'FAIZ'

WHERE personid = 20

Since baking is one of my hobbies, why not find a baker who I can work for? (Hint: List all bakers and use ‘ORDER BY gold’ to sort the results. ‘ORDER BY gold DESC’ is even better because then the richest baker is on top.)

SELECT \* FROM inhabitant WHERE job = 'baker'

ORDER BY gold DESC

Graphical user interface, table

Description automatically generated with medium confidence

### Aha, Paul! I know him!

### Hi, you again! So, FAIZ is your name. I saw you want to work as a baker? Okay! You will be paid 1 gold for 100 bread rolls.

### (8 hours later...) Here, I made ten thousand bread rolls! I quit! This should be enough money to buy a sword. Let's see what happens with my gold balance.

UPDATE inhabitant SET gold = gold + 100 - 150 WHERE personid = 20

### Here's your new sword, FAIZ! Now you can go everywhere.

### My name is FAIZ! Thanks anyway!

INSERT INTO item (item, owner) VALUES ('sword', 20)

### Is there a pilot on this island by any chance? He could fly me home.

SELECT \*

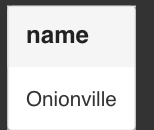
FROM inhabitant

WHERE job = 'pilot'



### Oh no, his state is 'kidnapped'.

### Horrible, the pilot is held captive by Dirty Dieter! I will show you a trick how to find out the name of the village where Dirty Dieter lives.

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### The expression presented here is called a join. It combines the information of the inhabitant table with information of the village table by matching villageid values.

### Thanks for the hint! I can use the join to find out the chief's name of the village Onionville. (Hint: In the column 'chief' in the village table, the personid of the chief is stored)

SELECT inhabitant.name

FROM village, inhabitant

WHERE village.chief = inhabitant.personid

AND village.name = 'Onionville'

Shape

Description automatically generated with medium confidence

### Um, how many inhabitants does Onionville have?

### SELECT COUNT(\*) FROM inhabitant, village WHERE village.villageid = inhabitant.villageid AND village.name = 'Onionville'

Graphical user interface, application

Description automatically generated

### Hello FAIZ, the pilot is held captive by Dirty Dieter in his sister's house. Shall I tell you how many women there are in Onionville? Nah, you can figure it out by yourself! (Hint: Women show up as gender = 'f')

SELECT COUNT(\*)

FROM inhabitant, village

WHERE village.villageid = inhabitant.villageid

AND village.name = 'Onionville'

AND gender = 'f'

Graphical user interface, application, Teams

Description automatically generated

### Oh, only one woman. What's her name?

SELECT name

FROM inhabitant

WHERE villageid = 3

AND gender = 'f'

A picture containing shape

Description automatically generated

### FAIZ, if you hand me over the entire property of our nearby village Cucumbertown, I will release the pilot. I will show you now what this property consists of.

SELECT SUM(inhabitant.gold) FROM inhabitant, village WHERE village.villageid = inhabitant.villageid AND village.name = 'Cucumbertown'

Graphical user interface, text, application

Description automatically generated

### Oh no, baking bread alone can't solve my problems. If I continue working and selling items though, I could earn more gold than the worth of gold inventories of all bakers, dealers and merchants together. How much gold is that?

### SELECT SUM(inhabitant.gold)

### FROM inhabitant

### WHERE job = 'baker' OR job = 'dealer' OR job = 'merchant'.

### Graphical user interface, text, application Description automatically generated

### That's not enough.

### Let's have a look at how much average gold people own, depending on their job.

### SELECT job, SUM(inhabitant.gold), AVG(inhabitant.gold)

### FROM inhabitant

### GROUP BY job

### ORDER BY AVG(inhabitant.gold);

### Table Description automatically generated

### Very interesting: For some reason, butchers own the most gold. How much gold do different inhabitants have on average, depending on their state (friendly, ...)?

### SELECT state, AVG(inhabitant.gold)

### FROM inhabitant

### GROUP BY state

### ORDER BY AVG(inhabitant.gold);

### Graphical user interface, application, Teams Description automatically generated

### Ok, so the only way is to mug the villains.

### Or I might as well go ahead and just kill Dirty Dieter with my sword!

### DELETE FROM inhabitant

### WHERE name = 'Dirty Dieter';

### Heeeey! Now I'm very angry! What will you do next, FAIZ?

### DELETE FROM inhabitant

### WHERE name = 'Dirty Diane';

### Yeah! Now I release the pilot!

UPDATE inhabitant

SET state = 'friendly'

WHERE state = 'kidnapped';

**Thank's for releasing me, FAIZ! I will fly you home!**

### I take my sword, some gold and lots of useless items with me as a souvenir. What a big adventure!

UPDATE inhabitant

SET state = 'emigrated'

WHERE personid = 20:

