

SQL Island Solution

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

```
SELECT * FROM INHABITANT;
```

2. Okay, let's see who is friendly on this island...

```
SELECT * FROM INHABITANT  
WHERE state = "friendly";
```

3. 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";
```

4. 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";
```

5. 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 (separated by a comma) and you will only get the columns you need.)

```
SELECT personid FROM INHABITANT  
WHERE name = "Stranger";
```

6. 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";
```

7. 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;
```

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

```
UPDATE ITEM SET owner = 20  
WHERE owner IS NULL;
```

9. Now list all of the items I have!

```
SELECT * FROM ITEM  
WHERE owner = 20;
```

10. 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 (job = "dealer" OR job = "merchant")  
AND state = "friendly";
```

11. 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";
```

12. 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 = "Vinayak"  
WHERE personid = 20;
```

13. 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;
```

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

```
SELECT * FROM INHABITANT  
WHERE job = "pilot";
```

15. 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 INHABITANT JOIN VILLAGE  
ON inhabitant.personid = village.chief  
WHERE village.name = "Onionville";
```

16. Hello Vinayak, 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')

```
FROM INHABITANT JOIN VILLAGE  
ON inhabitant.villageid = village.villageid  
WHERE village.name = "Onionville"
```

AND inhabitant.gender = "f";

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

**SELECT inhabitant.name
FROM INHABITANT JOIN VILLAGE
ON inhabitant.villageid = village.villageid
WHERE village.name = "Onionville"
AND inhabitant.gender = "f";**

18. 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 JOIN VILLAGE
ON inhabitant.villageid = village.villageid
WHERE inhabitant.job = "baker"
OR inhabitant.job = "banker"
OR inhabitant.job = "dealer"
OR inhabitant.job = "merchant";**

19. 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(gold)
FROM INHABITANT
GROUP BY state
ORDER BY AVG(gold);**

20. Heeeey! Now I'm very angry! What will you do next, Vinayak?

**DELETE FROM INHABITANT
WHERE name = "Dirty Diane";**

21. Yeah! Now I release the pilot!

```
UPDATE INHABITANT SET state = "friendly"  
WHERE state = "kidnapped";
```

22. The game is over. Get your certificate of completion now! If you want to change the name on the certificate, use an UPDATE command on the inhabitants table.

```
UPDATE INHABITANT SET name = "Vinayak Goyal"  
WHERE personid = 20;
```

Certificate of Completion-

