

# SWISH

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This assignment is **individual**.

**Deadline:** The deadline is **October 28, 2022, 17:00** and it is strict.

**Submission:** Please, submit your solution in Canvas as a single text file.

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## 1 SWISH

In this exercise we are going to solve a puzzle using Prolog. For that, you are going to use an online editor called SWISH [1]. The website also provides users with examples and tutorials; check, for instance, the Einstein's Riddle example.

For this exercise, let's suppose that your marine biologist friend is away studying the elusive king fish. She has tasked you with taking care of her aquarium of rescue fish. Four of the fish are in need of medicine, and your friend has left you a description of these such that you can accurately identify them. But disaster strikes, you have spilled coffee on the list! And there is no way to communicate with your friend. Fortunately parts of the descriptions are still visible and you seem to recall some facts from memory. Can you puzzle together the pieces in order to correctly identify each fish in need of medicine?

We know that there are four fish in need of medicine (betty, guppy, puttsy, starry) each having a distinct color (blue, gold, red, silver) with another feature of appearance (shiny, spotted, striped). Some prefer different hideouts (log, rock, seaweed) and enjoy different treats (flakes, strawberries, worms). We also know that two fish are buddies if they share the same hideout. Furthermore, we know the following facts:

- F1 betty is red.
- F2 puttsy has spots.
- F3 starry enjoys flakes.
- F4 the golden fish is shiny.
- F5 the silver fish stays at the seaweed.
- F6 the blue fish is shiny and stays at the rock.
- F7 guppy and puttsy are buddies.
- F8 two of the fish enjoy flakes.
- F9 starry and a fish who likes strawberries share the same feature.
- F10 a fish is striped and enjoys worms, but it's not guppy.

Download the file **SWISH.txt** from Canvas and paste its contents in the online editor [1]. The skeleton of the problem is ready. Your task is to fill in the missing facts.

**How to submit:** Under the assignment SWISH, upload SWISH.txt. Make sure that your submitted file does not contain syntax errors.

## REFERENCES

- [1] An online Prolog editor and solver, <https://swish.swi-prolog.org/>