Bielefeld University
Faculty of Technology

Genome Data Science
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Programming
Winter 24/25

Exercises

Number 00, Submission Deadline: October 16, 2024

1. Find 1-2 fellow classmates to team up with for jointly solving and submitting the weekly exercise sheets (this included). You can use the following thread in Moodle to get in contact with your classmates: (2 P)

   https://moodle.uni-bielefeld.de/mod/hsuforum/view.php?id=374211

   Then, send me an email (lpianesi@cebitec.uni-bielefeld.de) with a list of group members.

2. Starting from Scratch! (9 P)
   For this exercise, you will implement in Scratch, at scratch.mit.edu, any project of your choice, be it an interactive story, game, animation, or anything else, subject only to the following requirements:

   - Your project must use at least two sprites, at least one of which must not be a cat.
   - Your project must use at least one conditional, at least one loop, and at least one variable.
   - Your project must use at least one custom block that you have made yourself (via **Make a Block**), which must take at least one input.

   Here are some examples:

   - It's Raining Men, an animation
   - Soccer, a game
   - Cookie Love Story, an animation
   - Gingerbread Tales, an interactive story
   - Intersection, a game

   You might find these Tutorials or Starter projects helpful. Try to think of an idea on your own, and then set out to implement it. However, don't try to implement the entirety of your project all at once: tackle one piece at a time, just as we did in lecture. In other words, take baby steps: write a bit of code (i.e., drag and drop a few puzzle pieces), test, write a bit more, test, and so forth. And select **File** > **Save** now every few minutes so that you don't lose any work!
   If, along the way, you find it too difficult to implement some feature, try not to fret; alter your design or work around the problem. If you set out to implement an idea that you find fun, odds are you won't find it too hard to satisfy the above requirements.
   Once finished with your project, select **File** > **Save now** one last time. Then select **File** > **Save to your computer** and keep that file so that you can submit it. If prompted by your computer to **Open** or **Save** the file, be sure to **Save** it.

3. Time to chat! (9 P)
   Start a new conversation with BIKI. Say hi first (yes, it's a chatbot, but there is no reason to treat it rudely, right?), then proceed to tell it that you want to learn how to code! But before answering, you should also tell it to ask you questions to clarify the context. Therefore, your prompt must have the following characteristics:

   - An opening salutation.
   - A line where you tell BIKI you want to learn to code.
   - A line where you tell BIKI to ask you questions before answering.

   Wait for the chatbot's reply, and carefully read its content. Is it written in a comprehensible language or are there grammatical or syntactical mistakes? Is it coherent with the context? How accurate is the reply?
   Now keep the conversation going by replying to BIKI's clarification requests, and wait for its reply.
   Now BIKI's reply should look something like a bullet point list containing several suggestions about different aspects of learning to code. Explore them and see if you find something interesting! Did you already know some of these resources?
   Write a short paragraph about your interaction with the chatbot and some considerations you have about its replies (around 200 words).

Important: a complete submission should contain:

- A sent email to my address.
- One or more `.sb3` files containing your Scratch project, uploaded on Moodle.
- One `.pdf` file containing screenshots of your conversation with BIKI and a written paragraph, uploaded on Moodle.