



# C Piscine

## Rush02

*Summary: This document is the subject for Rush02 of the C Piscine @ 42.*

*Version: 11.0*

# Contents

<b>I</b>	<b>Foreword</b>	<b>2</b>
<b>II</b>	<b>Instructions</b>	<b>3</b>
<b>III</b>	<b>AI Instructions</b>	<b>4</b>
<b>IV</b>	<b>Subject</b>	<b>6</b>
<b>V</b>	<b>Bonuses</b>	<b>8</b>
<b>VI</b>	<b>Submission and peer-evaluation</b>	<b>9</b>

# Chapter I

## Foreword

Here is an old-fashioned pecan pie recipe for you:

### Ingredients

- Pastry dough
  - 3/4 stick unsalted butter
  - 1 1/4 cups packed light brown sugar
  - 3/4 cup light corn syrup
  - 2 teaspoons pure vanilla extract
  - 1/2 teaspoon grated orange zest
  - 1/4 teaspoon salt
  - 3 large eggs
  - 2 cups pecan halves (1/2 pound)
- Accompaniment: whipped cream or vanilla ice cream

### Preparation

Preheat the oven to 350°F with a baking sheet on middle rack.

Roll out the dough on a lightly floured surface with a lightly floured rolling pin into a 12 inch round and fit it into a 9 inch pie plate.

Trim the edge, leaving a 1/2-inch overhang.

Fold the overhang under and lightly press it against rim of pie plate, then crimp decoratively.

Lightly prick the bottom all over with a fork.

Chill until firm, at least 30 minutes (or freeze for 10 minutes).

Meanwhile, melt the butter in a small heavy saucepan over medium heat.

Add the brown sugar, whisking until smooth.

Remove from the heat and whisk in corn syrup, vanilla, zest, and salt.

Lightly beat the eggs in a medium bowl, then whisk in corn syrup mixture.

Put the pecans in pie shell and pour corn syrup mixture evenly over them.

Bake on the hot baking sheet until filling is set, 50 minutes to 1 hour.

Let it cool completely.

### Cook's notes:

The pie can be baked 1 day ahead and chilled. Bring it to room temperature before serving.

# Chapter II

## Instructions

- You must do the project with the imposed team. Meeting with your teammates is part of your tasks, using any appropriate means (Slack, email, phone if available, or directly in person).
- If you have really tried everything to reach one of your teammates, but they still remain unreachable, follow the instructions from your pedagogical team, if provided. The default procedure is to do the project with the available teammates, and discuss the situation during the evaluation. Even if the group leader is missing, you still have access to the submission directory.
- Your work must comply with the Norm. If you have bonus files/functions, they are included in the norm check, and you will receive a score of 0 if there is a norm error.
- You must handle errors coherently. You may either print an error message or simply return control to the user.
- Your project must be completed and pushed to the Git repository by the deadline displayed on the project's main page on the intranet.
- You must follow the submission procedure described at the end of this document, if provided.
- Your program must compile using `cc` with the following flags: `-Wall -Wextra -Werror`. If there is a `moulinette`, it will use the same compiler and flags.
- If your program does not compile, you will receive a score of 0.
- The group will be automatically registered for the defense. You must attend your evaluation with all of your teammates. The purpose of the defense is to present and explain your work comprehensively.
- Do not cancel your evaluation; you will not get a second one.
- Each member of the group must be fully aware of all the details of the project. If you choose to split the workload, ensure you understand every part completed by other team members. This understanding may be verified during the evaluation.
- You must submit a Makefile, which will compile your project using the rules `$NAME`, `clean` and `fclean`.

# Chapter III

## AI Instructions

### ● Context

The C Piscine is intense. It's your first big challenge at 42 — a deep dive into problem-solving, autonomy, and community.

During this phase, your main objective is to build your foundation — through struggle, repetition, and especially **peer-learning** exchange.

In the AI era, shortcuts are easy to find. However, it's important to consider whether your AI usage is truly helping you grow — or simply getting in the way of developing real skills.

The Piscine is also a human experience — and for now, nothing can replace that. Not even AI.

For a more complete overview of our stance on AI — as a learning tool, as part of the ICT curriculum, and as a growing expectation in the job market — please refer to the dedicated FAQ available on the intranet.

### ● Main message

- 👉 Build strong foundations without shortcuts.
- 👉 Really develop tech & power skills.
- 👉 Experience real peer-learning, start learning how to learn and solve new problems.
- 👉 The learning journey is more important than the result.
- 👉 Learn about the risks associated with AI, and develop effective control practices and countermeasures to avoid common pitfalls.

## ● **Learner rules:**

- You should apply reasoning to your assigned tasks, especially before turning to AI.
- You should not ask for direct answers to the AI.
- You should learn about 42 global approach on AI.

## ● **Phase outcomes:**

Within this foundational phase, you will get the following outcomes:

- Get proper tech and coding foundations.
- Know why and how AI can be dangerous during this phase.

## ● **Comments and example:**

- Yes, we know AI exists — and yes, it can solve your projects. But you're here to learn, not to prove that AI has learned. Don't waste your time (or ours) just to demonstrate that AI can solve the given problem.
- Learning at 42 isn't about knowing the answer — it's about developing the ability to find one. AI gives you the answer directly, but that prevents you from building your own reasoning. And reasoning takes time, effort, and involves failure. The path to success is not supposed to be easy.
- Keep in mind that during exams, AI is not available — no internet, no smartphones, etc. You'll quickly realise if you've relied too heavily on AI in your learning process.
- Peer learning exposes you to different ideas and approaches, improving your interpersonal skills and your ability to think divergently. That's far more valuable than just chatting with a bot. So don't be shy — talk, ask questions, and learn together!
- Yes, AI will be part of the curriculum — both as a learning tool and as a topic in itself. You'll even have the chance to build your own AI software. In order to learn more about our crescendo approach you'll go through in the documentation available on the intranet.

### ✓ **Good practice:**


I'm stuck on a new concept. I ask someone nearby how they approached it. We talk for 10 minutes — and suddenly it clicks. I get it.

### ✗ **Bad practice:**

I secretly use AI, copy some code that looks right. During peer evaluation, I can't explain anything. I fail. During the exam — no AI — I'm stuck again. I fail.

# Chapter IV

## Subject

	Exercise 00
rush-02	
Turn-in directory: <i>ex00/</i>	
Files to turn in: <b>Makefile</b> and <b>all the necessary files</b>	
Allowed functions: <b>write, malloc, free, open, read, close</b>	

- Create a program that takes a number as an argument and converts it to its written letter value.
- Executable name: **rush-02**
- Your source code will be compiled as follows:

```
make fclean
make
```

- Your program can take up to 2 arguments:
  - If there is only one argument, it is the number that you need to convert.
  - If there are two arguments, the first argument is the new reference dictionary and the second argument is the number that you need to convert.
- If the argument representing the number is not a valid and positive integer, your program must output "Error" followed by a newline.



Your program should handle numbers beyond the range of unsigned int.

- Your program must parse the dictionary given as a resource to the project. The values inside it must be used to print the result. These values can be modified.
- Any memory allocated on the heap (with malloc(3)) must be freed correctly. This will be verified during the evaluation.
- The dictionary will have the following rules:

```
[a number][0 to n spaces]:[0 to n spaces][any printable characters]\n
```

- You will trim the spaces before and after the values in the dictionary.
  - The dictionary will always have at least the keys contained in the reference dictionary. Their values can be modified, more entries can be added, but the initial keys can't be removed.
  - The entries of the dictionary can be stored in any order.
  - There can be empty lines in the dictionary.
  - If you have any errors from the dictionary parsing, your program must output "Dict Error\n".
  - If the dictionary does not allow you to perform the conversion of the provided number, your program must output "Dict Error\n".
- Example:

```
$> ./rush-02 42 | cat -e
forty two$
$> ./rush-02 0 | cat -e
zero$
$> ./rush-02 10.4 | cat -e
Error$
$> ./rush-02 100000 | cat -e
one hundred thousand$
$> grep "20" numbers.dict | cat -e
20 :      hey everybody ! $
$> ./rush-02 20 | cat -e
hey everybody !$
```



# Chapter V

## Bonuses

You can complete the following bonuses:

- Using “-”, “,”, “and” to be closer to the correct written syntax.
- Doing the same exercise in a different language, using another dictionary which will contain the translated entries.
- Using `read` to read numbers from the standard input (one per line) when the command line argument for the number is “-”.

Example:

```
$> ./rush-02 -  
42  
forty two  
0  
zero  
^D  
$>
```

# Chapter VI

## Submission and peer-evaluation

Submit your assignment to your `Git` repository as usual. Only the work inside your repository will be evaluated during the defense. Do not hesitate to double-check the names of your files to ensure they are correct.

This assignment is not verified by a program. You are free to organize your files as you wish, provided you submit the mandatory files and comply with the requirements.



Submit only the files requested by the subject of this project.