

Unit 0: Overview

Programming 2

Degree in Computer Engineering
University of Alicante
2022-2023



WHO ARE WE?



CSE STUDENTS!



**WHAT ARE OUR
EXPECTATIONS?**



**CODING GAMES
AND HACKING!**



**WHAT ARE WE
ACTUALLY DOING?**



cout << "HELLO WORLD!";



- Core subject in the Computer Science Degree
- 6 ECTS credits
- Main (official) policies for the course can be found at:
<https://cvnet.cpd.ua.es/Guia-Docente/?wlengua=en&wcodasi=34008&scaca=2022-23>
- **Course materials can be found in Moodle via UACloud**
- News and tutoring through UACloud and Moodle
- Follow us on Twitter: @prog2ua

- Coordinator:
 - David Tomás
- Theoretical sessions teachers:
 - Jorge Calvo, Carlos Pérez (VAL), Matías Díaz, and David Tomás (ARA and I2ADE)
- Lab sessions teachers:
 - Alicia Garrido, Gonzalo Alcalá, Matías Díaz, Francisco Moreno, Jorge Calvo, Jorge Calera, Carlos Pérez, and David Tomás

- Face to face:
 - In the office or by video conference
 - Office hours available at <http://www.dlsi.ua.es>
 - Necessary to book an appointment via UACloud
- Online:
 - Using UACloud (questions are answered as soon as possible)
 - Do not make enquiries by e-mail

"C++ makes it harder to shoot yourself, but when you do it blows your whole leg off"

Bjarne Stroustrup, C++ creator

- Unit 1. Introduction
- Unit 2. The `string` class
- Unit 3. Files
- Unit 4. Dynamic memory
- Unit 5. Introduction to object oriented programming

Aims

- To analyse the requirements of a problem
- To design and implement mid-sized programs
- To develop abstraction and generalisation skills
- To properly organise a program using functions and classes
- To identify the most efficient solutions
- To implement software using an adequate and understandable programming style
- To develop criticism in the algorithm verification process
- To use basic programming tools
- To learn basic notions of object oriented programming

Assessment (1/3)

- Theory (50% of the final mark):
 - Exam with programming problems that you will have to implement
 - It will be done in lab's computers
 - **Date: 7 June 2023**
- Assignments (50% of the final mark):
 - Three assignments: $p1$, $p2$ and $p3$
 - **Assignment mark = $0,3 * p1 + 0,3 * p2 + 0,4 * p3$**
 - Self-checking software (*autocorrector*) will be provided before each submission
 - Mark for $p3$ is exclusively obtained by using an automatic evaluation program (*corrector*), which is an extension of the self-checking software provided to you but containing more evaluation cases
 - Marks for $p1$ and $p2$ are obtained as a combination of automatic evaluation (70%) and teacher's manual review (30%)

Assessment (2/3)

- In order to get your average mark comprising theory and assignments, a minimum grade of 4 is required on both parts
- The final mark must be 5 or higher to pass the subject
- Algorithm to calculate the final mark:

```
assignmentMark = 0.3*p1 + 0.3*p2 + 0.4*p3;  
  
if (theoryMark >= 4 && assignmentMark >= 4)  
    finalMark = 0.5*theoryMark + 0.5*assignmentsMark;  
else  
    finalMark= kFAIL;
```

- In case of failing in June:
 - The assignments mark is saved for July if it is greater than or equal to 4
 - **The theory mark is not saved for July**
 - If you do not get at least a 4 in the assignments in June, you will not be able to pass in this call (since marks cannot be averaged) and, therefore, it does not make sense to take the theory exam in June (as the mark is not saved for July)
- July call:
 - **Theory: programming exam on 5 July 2023**
 - Assignments: *p3* with additional functionalities and/or tests

Lab sessions guidelines

- Your lab group can be consulted at UACloud
- It is not possible to change your assigned group (if justified reasons such as work or family issues exist, you may request group change at the secretariat of EPS)
- Lab sessions beginning: Monday, January 30
- **Assignments are done individually**
- **Attendance is mandatory: maximum 3 unjustified absences**
- It is necessary to strictly follow the instructions in the assessments (especially those regarding the output format of your program or submission instructions)

Cheating (1/3)

- The only way to learn to program is by programming
- Assessments are designed so that students learn in a practical way during the semester
- A student who copies (or who gets the assignment done by someone else) rarely learns and passes the course

- Regulation for student evaluation at UA, Article 14.1:
“Students must respect the rules about the authenticity of the presented work and its privacy.”
- Copying an assignment from another student, in whole or in part, violates the Article 14.1 (authenticity)
- Sharing an assignment (so other students could copy it or get inspiration), also violates Article 14.1 (privacy)

- Regulation for students evaluation at UA, Article 14.4:
“In any case, fraudulent actions in an evaluation procedure will result in a failing grade, with a numerical score of zero in that test, without prejudice to the disciplinary procedure that could be initiated against the student and, if appropriate, the sanction that could be applied in accordance with the present legislation”
- Students involved in cheating will get 0 in the corresponding assignment or exam and a report will be sent to EPS for subsequent disciplinary actions

Schedule (provisional)

Monday	Wednesday	Thursday	Friday	Submission
30/01 T0	01/02 T0	02/02 T0	03/02 T0	-
06/02 T1 (1)	08/02 T1 (1)	09/02 T1 (1)	10/02 T1 (1)	-
13/02 T1 (2)	15/02 T1 (2)	16/02 T1 (2)	17/02 T1 (2)	-
20/02 T1 (3)	22/02 T1 (3)	23/02 T1 (3)	24/02 T1 (3)	<i>p1</i>
27/02 T2	01/03 T2	02/03 T2	03/03 T2	-
06/03 T3 (1)	08/03 T3 (1)	09/03 T3 (1)	10/03 T3 (1)	-
13/03 T3 (2)	15/03 T3 (2)	16/03 T3 (2)	17/03 T3 (2)	-
20/03 T4	22/03 T4	23/03 T4	24/03 T4	-
27/03 T5 (1)	29/03 T5 (1)	30/03 T5 (1)	31/03 T5 (1)	<i>p2</i>
03/04 T5 (2)	05/04 T5 (2)	06/04 -	07/04 -	-
10/04 -	12/04 -	13/04 -	14/04 -	-
17/04 -	19/04 Exer.	20/04 -	21/04 -	-
24/04 T5 (3)	26/04 T5 (3)	27/04 T5 (2)	28/04 T5 (2)	-
01/05 -	03/05 T5 (4)	04/05 T5 (3)	05/05 T5 (3)	-
08/05 T5 (4)	10/05 T5 (5)	11/05 T5 (4)	12/05 T5 (4)	-
15/05 T5 (5)	17/05 Exer.	18/05 T5 (5)	19/05 T5 (5)	-
22/05 Exer.	24/05 Exer.	25/05 -	26/05 -	<i>p3</i>

In order to pass Programming 2...

- You must practice a lot
- You need to do the theoretical exercises and the assignments
- You cannot pass by starting to study a week before the exam
- Raise your doubts in both theoretical and lab practice sessions
- If you get lost, do in-person or online tutoring