Code@Youth
An Innovative Program in the Digital Era

"HOW TO" MANUAL
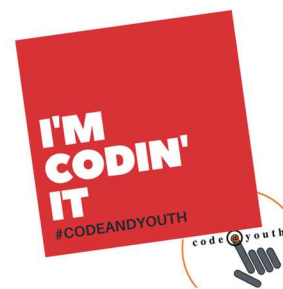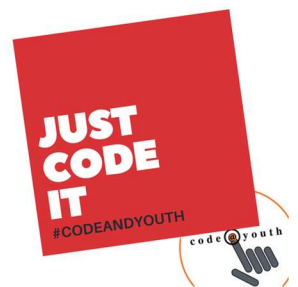
YES, WE CODE
#CODEANDYOUTH
code@youth

JUST CODE IT
#CODEANDYOUTH
code@youth

I'M CODIN' IT
#CODEANDYOUTH
code@youth

NOW LET'S CODE
#CODEANDYOUTH
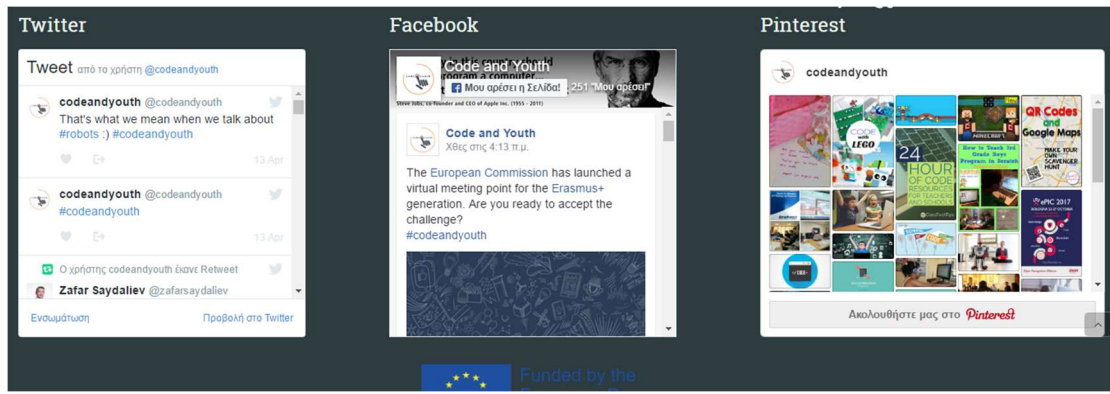code@youth

Table of Contents

Home Page, Registration and Login
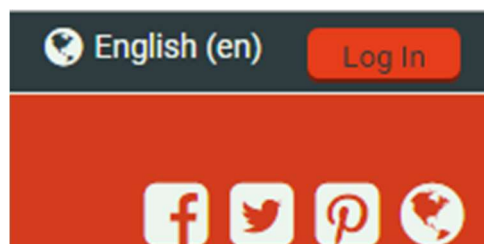
Moodle Home Page

This is the home page of Code@Youth Program. In this page users can be informed about the available courses, have a look at any announcements concerning the program and approach links to Code@Youth's social media and forum.

At the top right corner there is the button that leads to the Login Page.

Finally, at this page there is menu that allows users to change between languages. The available languages are English, German, Italian and Greek.

Log In

This is the page where users fill up their personal username and password in order to log in. There may be some lessons that allow users to connect as guests. How users join a Moodle site depends on the establishment: they might be given logins; they might be allowed to make accounts themselves, or they might be signed in automatically from another system. In Code and Youth's Moodle Platform users are welcomed to create their personal accounts. When created the teachers of the lessons can enroll users to them and assign roles.

If someone doesn't have an account there's the option to create one by clicking the "Create New Account" Button.

Create New Account

In this page new users can create a new account by choosing their username and password and filling some other info required. As mentioned above, after creating an account users can login but they aren't enrolled to any lessons yet until the teacher enrolls them. After that they can access lessons' material.

After Login

Navigation Bar

This is the menu bar that allows users to navigate to the main pages of Code and Youth Moodle that are analyzed bellow

Home

The front page of a Moodle site - the page you reach from your browser - usually includes information about the establishment itself and it's the initial page seen by someone reaching Code and Youth Moodle site before login. Typically a student will see courses, some blocks of information. The front page is called "Home" In the Navigation bar and Navigation block.

A combination of <u>site policies</u>, <u>user authentication</u> and <u>front page settings</u> determine who can get to the front page. And once they get there <u>what they can see</u> and <u>what they can do</u>.

In many ways, a Front Page has similar features and functions to those in a <u>Course</u>. For example, <u>Activities</u>, <u>Resources</u> and <u>Blocks</u> can be added to the Front Page to give it different looks

In Code and Youth Home page after the user logs in, he can have a look at any announcements concerning the program, approach links to Code@Youth's social media and forum, follow links to the available courses and navigate through the Navigation Block.

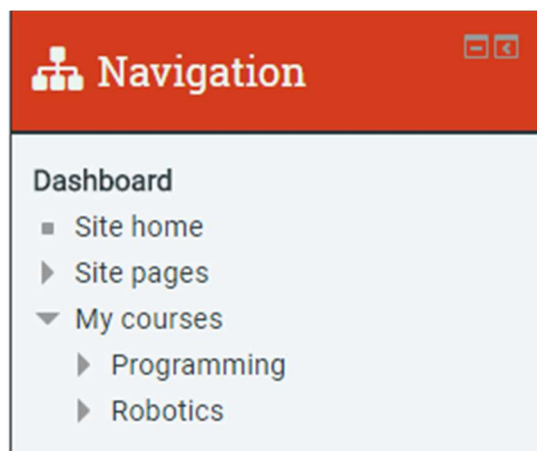**Dashboard**

This is the first page that appears when the user is logged in. In this page users can have an overview of the lessons in which they are enrolled and navigate through the menu to any tools and activities available.
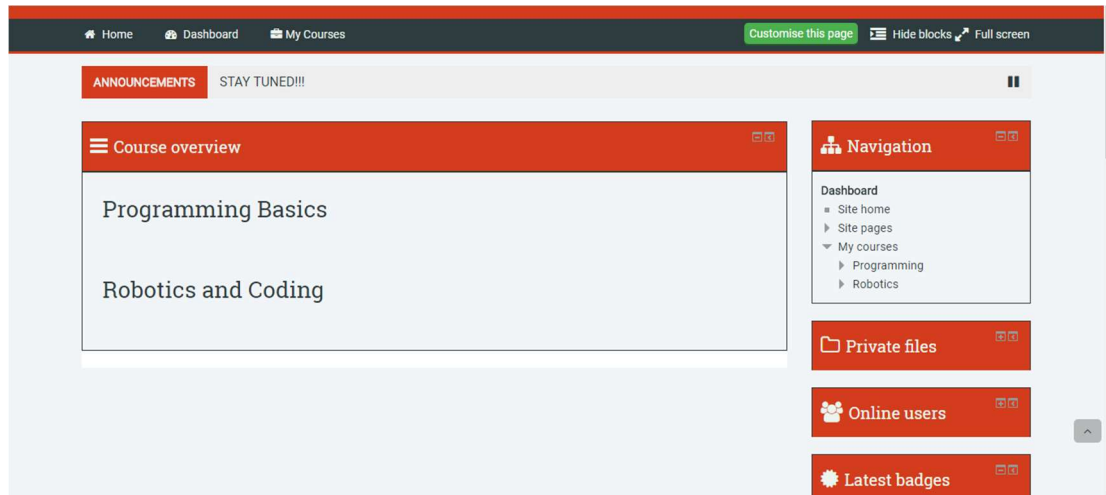
More specifically, users can use the navigation menu to switch between the Home Page or any of their lesson pages.

Code and Youth's Moodle allows users to upload and maintain personal files. They can do so by using the Private Files block that appears to their Dashboard. In this block users can view their files or click the link to manage them.
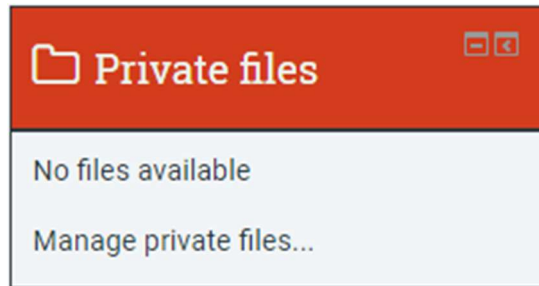
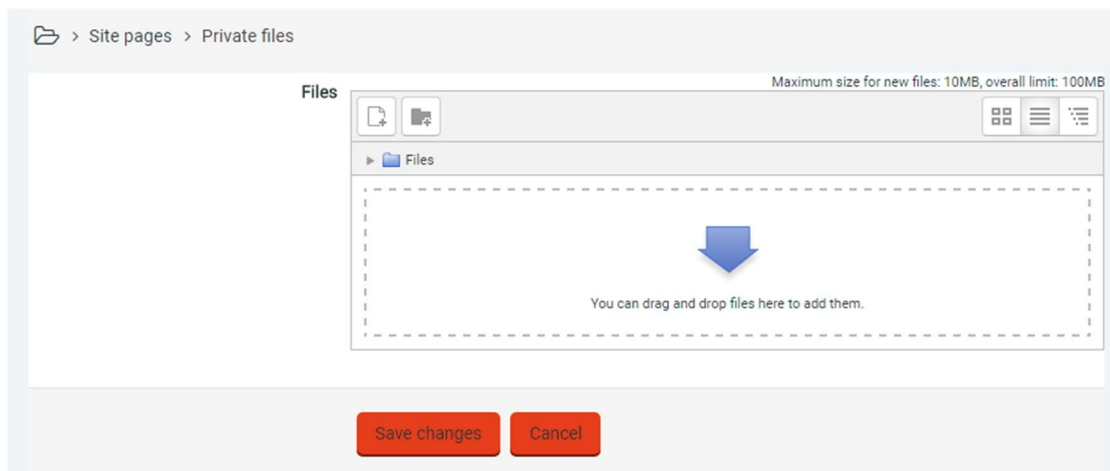By clicking the link they are led to their personal files' page where they can upload files by dragging and dropping them to the specified area

or by clicking the Add button and searching them on their computer files.
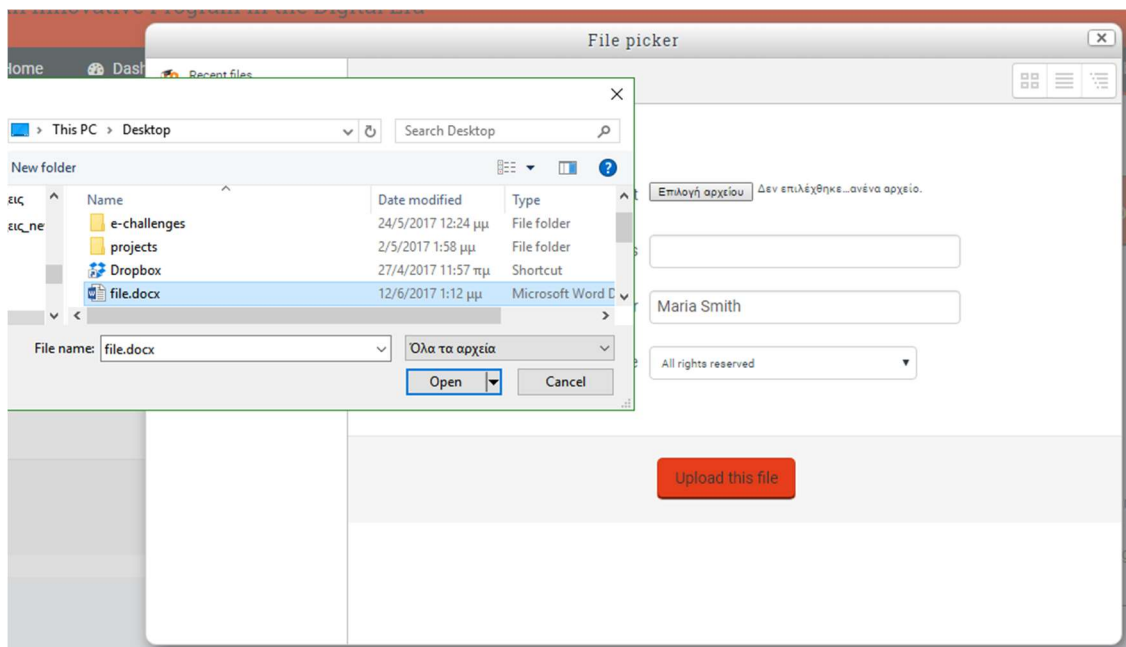
After they choose the file they want to upload they click the Upload Button

After uploading a file it appears on their file list and by clicking on it users can manage it, edit it and download it.
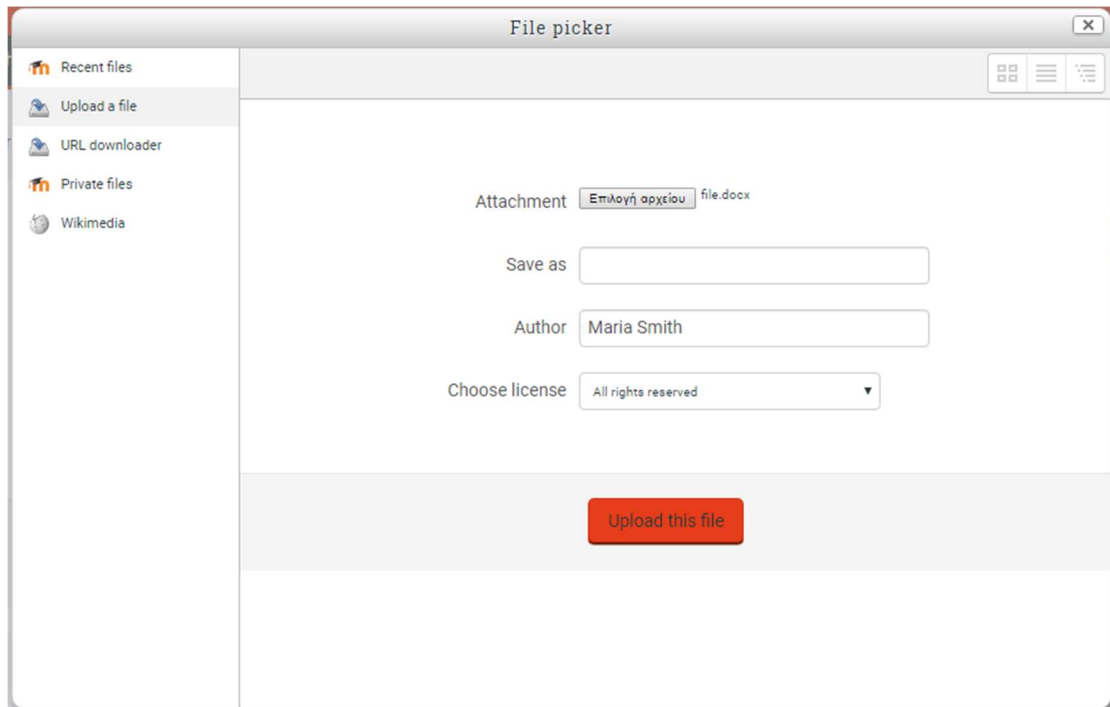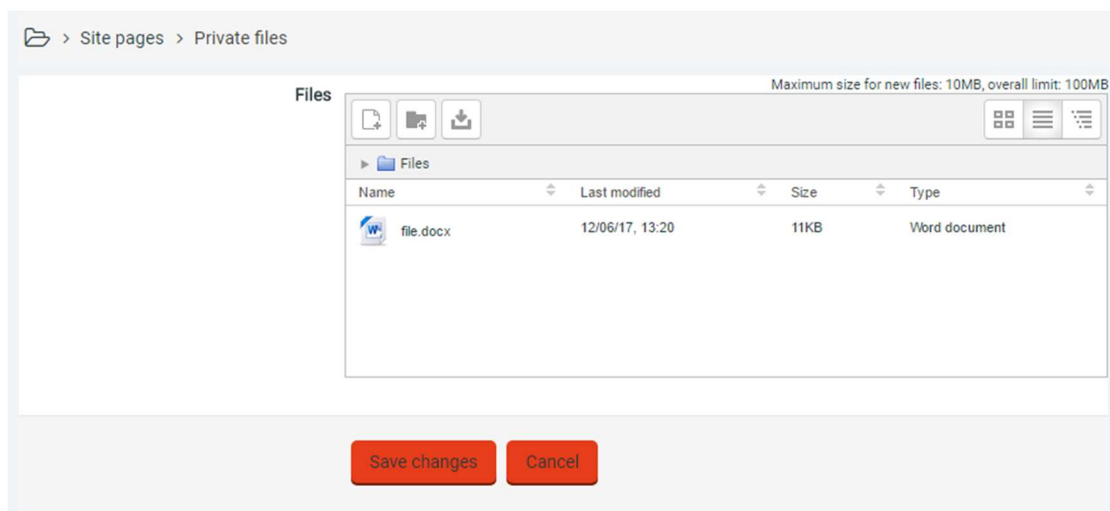
Furthermore, users can choose to create folders to organize their content and download all content to their personal computers.

Finally, at their dashboards users can also view other online users, their latest badges, their calendar and any upcoming events.
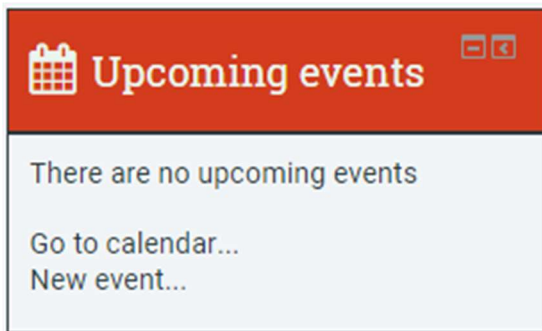
My Courses

Courses are the spaces on Moodle where teachers add learning materials and activities for their students. Courses may be created by admins, course creators or managers. Teachers can then add the content and re-organize them according to their own needs.

Students can view their course list at the Dashboard page or by clicking 'My Courses" at the Navigation Bar.

By clicking a course they are led to its page where they can find the following.

- **General Info**
  In this area students can find information concerning the teacher, the hours and contact and communication methods of the lesson.

  o **Announcements**
  Here the user can find any announcements or news posted for the specific lesson.
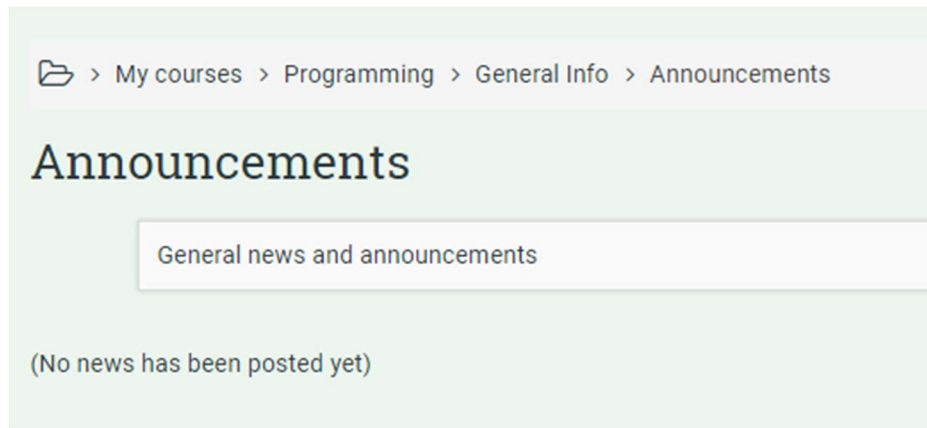
- o <u>Chatroom</u>

  There is a chatroom that allows users of a specific lesson to communicate. Once they are led to the chatroom page they have to enter the chat. After they enter they can see other users and sent personal messages to the ones that are online as well. The chatroom is used as a synchronous communication method where users can send direct messages.
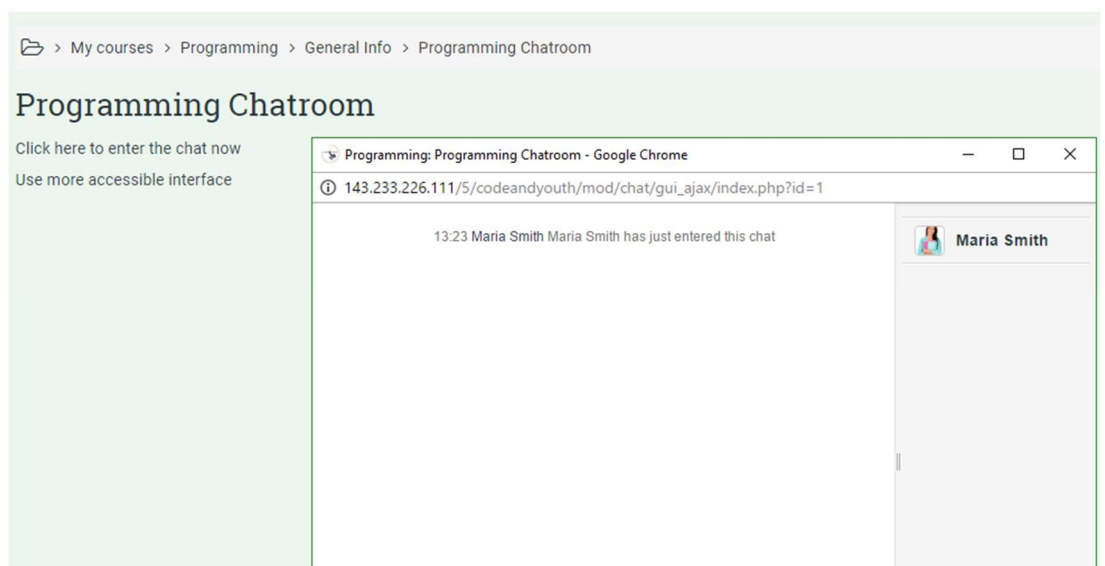
- o <u>Forum</u>

  In each lesson there is a forum that allows users to communicate and discuss any lesson issues. While the chatroom messages are private (between two users) and as mentioned above synchronous, forum messages are public and any enrolled user can see them and comment on them and also they are asynchronous.

Programming Forum

Add a new discussion topic

(There are no discussion topics yet in this forum)

If the user needs to add to the forum a new topic for discussion they can do so by clicking the "Add a new discussion topic" button. Once clicked it leads to another page where the user needs to fill in some information about the new topic. When the form is filled the user can post the new topic to the forum.

> My courses > Programming > General Info > Programming Forum

Programming Forum

▾ Your new discussion topic

Subject*	
Message*	B I ≔ ≡ 🔗 ✂ 🖼 🎞 📋

Discussion subscription ☑

Attachment Maximum size for new files: 500KB, maximum attachments: 9

▸ 📁 Files

You can drag and drop files here to add them.

Post to forum   Cancel

There are required fields in this form marked *.

o <u>Teacher's Forum</u>
This is like the Forum mentioned above but is only accessible to the users that have been given a teacher role.

Teachers' Forum
Not available unless: Your **Are you a Teacher?** is not empty

- o Checklist
  This option allows users to keep track of their progress in the specific lesson. Each lesson has a list of activities that are consi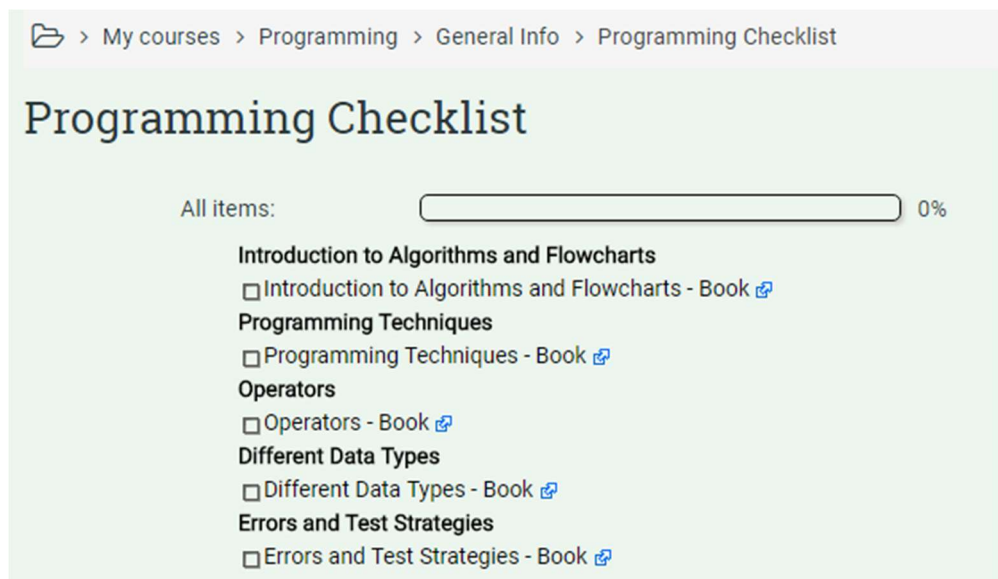dered necessary in order to complete it. Once the users completes an activity it is automatically checked and the completion bar percentage grows accordingly.

- o Supplementary Notes
  Here users can find supplementary material (glossaries, files etc) concerning the lesson.
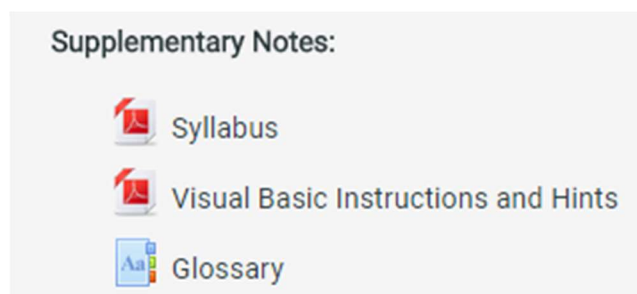
- **Topics**
  Each lesson is divided in a number of topics depending to the course syllabus.

  - o Books
    In each topic students can find a small description of it and a file that is used as a book.

Introduction to Algorithms and Flowcharts

1. Use flowcharts to describe the steps of an algorithm that includes sequence, selection and iteration.

2. Produce algorithms to solve problems using program flowcharts.

- Understand algorithms presented in the form of program flowcharts

Files:

📗 Introduction to Algorithms and Flowcharts - Book

Each book is divided in chapters. Once the user reads all the chapters the book is considered to be completed.

📁 > My courses > Programming > Introduction to Algorithms and Flowcharts > Introduction to Algorithms and Flowcharts - Book

Introduction to Algorithms and Flowcharts - Book

Next: 2. Guidelines for drawing a flowchart ▶

1. Intro

An algorithm is a procedure for solving a problem, based on conducting a sequence of specified actions. A computer program can be viewed as an elaborate algorithm. There are three basic logic structures in computer programming: sequence, iteration and selection.

Sequence: An action, or event, leads to the next ordered action in a predetermined order. The sequence can contain any number of actions, but no actions can be skipped in the sequence.

Iteration: The program asks a question, and if the answer requires an action, it is performed and the original question is asked again until the answer is such that the action is no longer required.

Selection: It is also called decision. In a selection structure, a question is asked, and depending on the answer, the program takes one of two courses of action, after which the program moves on to the next event.

A flowchart is a graphical or symbolic representation of a process. Each step in the process is represented by a different symbol and contains a short description of the process step. The flowchart symbols are linked together with arrows showing the process flow direction.

Flowcharts are designed in the early stages of formulating computer solutions and are used to create a communication link between programmers and business people. They are helpful in understanding the logic of complicated problems and play a vital role in the programming of a problem.

Writing complex programs in any programming language becomes easier after a flowchart is drawn. Flowcharts are helpful in explaining the program to others, so a flowchart is used for better documentation of a complex program.

Next: 2. Guidelines for drawing a flowchart ▶

Students can read the chapters continuously or approach them by the Table of Contents.

📙 **Table of contents**

1. Intro
2. Guidelines for drawing a flowchart
3. Flowchart Examples
   3.1. Example 2
   3.2. Example 3
   3.3. Example 4

- **Badges**

  On each course students are able to obtain a number of awards when completing specified activities. These awards are called Badges. In Code and Youth Moodle Site there are different badges for each lesson and more specifically there are different badges for each lesson topic.

  For each badge there is an image, a name, a description that analyzes what the badge concerns and some criteria that highlight what the user must accomplish in order to achieve this badge. Also, for each badge there is a list of roles that are responsible for awarding the badge (e.g. Teachers).

Programming Basics: Badges

Number of badges available: 6

Image	Name ▲	Description	Criteria	Issued to me ▲ ▼
	Programming Techniques	The owner of the Programming Techniques Badge has the basic knowledge regarding programming basics on the basis of Visual Basic. Learning Outcomes: • Identify the three basic programming constructs used to control the flow of execution: Sequence, Selection, Iteration • Understand and use selection in a procedural programming language (Visual Basic), including the use of IF Statements and CASE/SELECT Statements • Understand and use iteration in a procedural programming language (Visual Basic), including the use count-controlled loops (FOR-END FOR loops) and condition controlled loops (WHILE-ENDWHILE and REPEAT-UNTIL loops) • Understand and use nested selection and nested	Understand the three basic programming constructs: Sequence, Selection, and Iteration. Be able to use the three programming constructs in a procedural programming language (Visual Basic). Be able to understand and use IF statements, CASE/SELECT Statements. Users are awarded this badge when they complete the following requirement: • This badge has to be awarded by a user with the following role: ○ Teacher	

Robotics and Coding: Badges

Number of badges available: 7

Image	Name ▲	Description	Criteria	Issued to me ▲ ▼
	The Sumo Wrestle Program	The owner of the The 'Sumo Wrestle' Program Badge can familiarize with the 'Sumo Wrestle' program. Learning Outcomes: Understand the 'Sumo Wrestle' program. • Be able to implement and demonstrate the 'Sumo Wrestle' program. • Be able to improve the 'Sumo Wrestle' program	Program 'Sumo Wrestle' Program Users are awarded this badge when they complete the following requirement: • This badge has to be awarded by a user with the following role: ○ Teacher	
	edWare Variables	The owner of the edWare Variables Badge can familiarize with variables used in the edWare. Learning Outcomes: • Understand the two types of variables: 'bytes' and 'word'. • Be able to identify problems that involve variables. • Be able to declare and initialise variables. • Be able to use 'read' icons. • Be able to code a robot using 'read' icons. • Be able to use	Program Edison using read icons (e.g. alarm clock) Program Edison using 'read' and 'data' icons (e.g. follow the torch) Quiz (Variables, 'read' and 'data' icons) Users are awarded this badge when they complete	

- **Course Menu**

  - People
    On each course there is as mentioned before a number of people participating. Each user has the ability to view a list of the participants and some basic information about them along with their email addresses. Users can do so by clicking People on the specific course Menu.

- o <u>Grades</u>
  By clicking this option users can see their progress and grades for one particular lesson defined according to the lesson's needs. In Code and Youth Summer School there is not a strict policy for Grades and it is generally preferred to assign badges to students in order to award their progress.

- o <u>Chats</u>
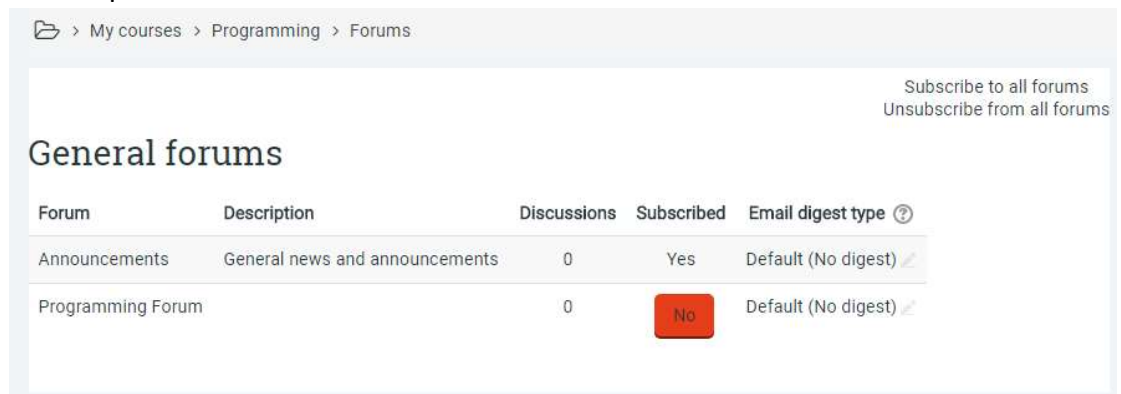 By clicking this option users can see a list of all the chats for this particular lesson.
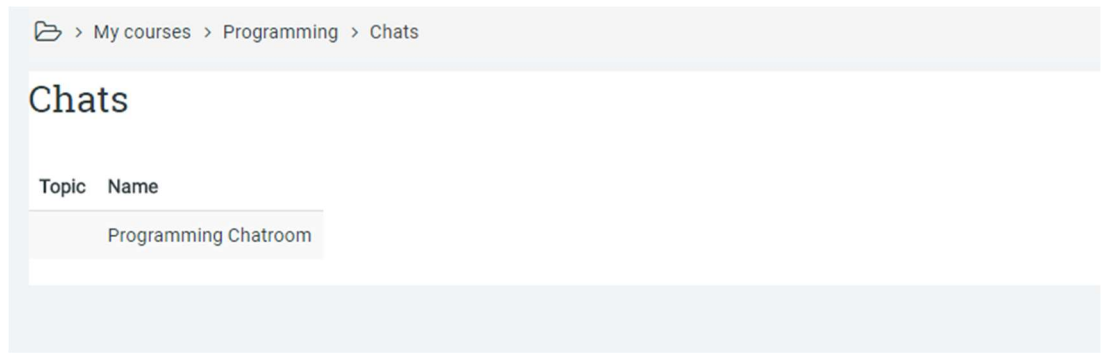
- o <u>Checklists</u>

  By clicking this option users can all the checklists and their progress in them for this particular lesson.
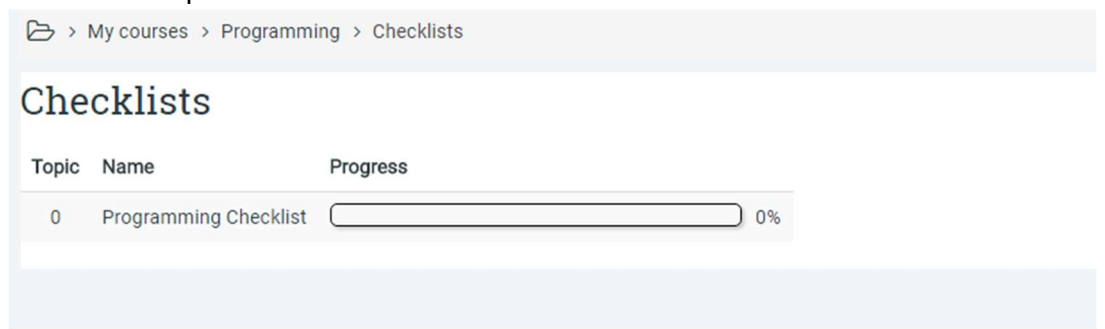
- o <u>Forums</u>

  By clicking this option users can see a list of all the forum conversations for this particular lesson.

- o <u>Glossaries</u>

  By clicking this option users can see a list of all the available glossaries for this particular lesson.

- o **Resources**

  By clicking this option users can see all available resources for this particular lesson.

Profile Menu

Moodle provides you with a personal profile that applies to all the Moodle subjects you are enrolled in. You can access your profile settings menu by clicking to your name at the top right corner.
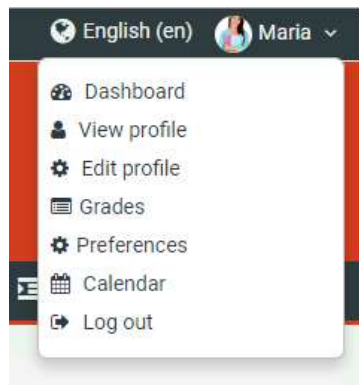
- **Dashboard**
Quick access to Dashboard is also available from the Profile Settings menu that appears on the top right corner of the screen when the user is logged in.

- **View your student profile**

Every user in Moodle has a Profile Page that can be reached from the Profile Menu, that appears on the top right corner of the screen when the user is logged in, once the user clicks View Profile option. This page links to further pages allowing the user to edit the profile information and preferences, view their forum/blog posts and check any reports they have access to.

In this page the user can see and access the badges that they have obtained.

Badges

Badges from Code@Youth: An Innovative Program in the Digital Era:

Basics-Edison Robot Badge

edWare Programs Badge

Basics-edWare Badge

- **Edit your student profile**

You can edit your profile information at any time by clicking the 'Edit profile' in the Profile Settings. You can choose to hide or display your email address, include a photo or an avatar, or add a link to your website. 'Edit profile'. If you wish to save the changes that have been made you can click Update Profile.

> Preferences > User account > Edit profile

Maria Smith

▾ General

|	
First name*	Maria
Surname*	Smith
Email address*	niki_tikis@hotmail.com
Email display	Allow everyone to see my email address
City/town	Athens
Select a country	United Kingdom
Timezone	Server timezone (Europe/Athens)
Description ⓘ	
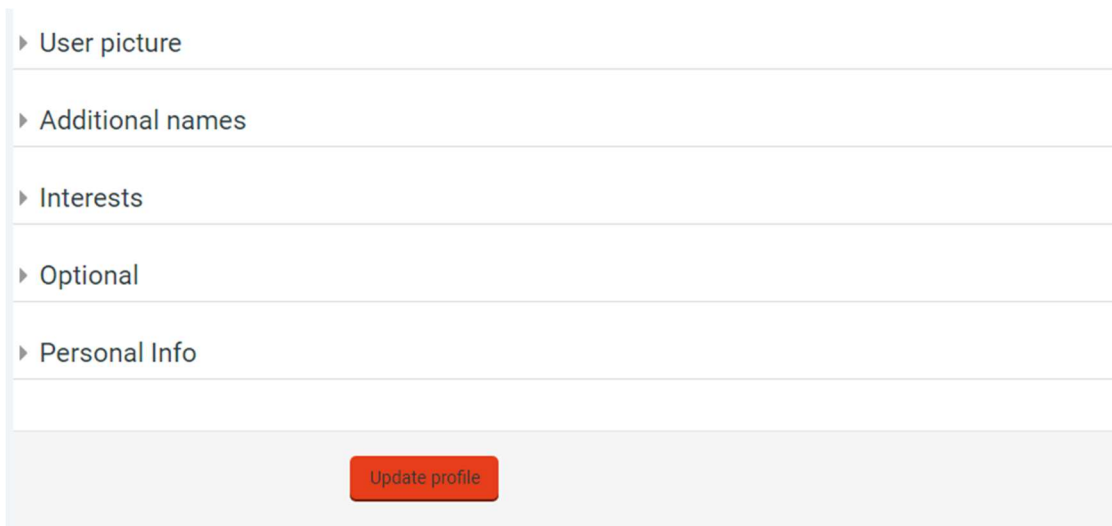
- **Preferences**

  By clicking this option the user can access a list of links that allow him to edit his profile settings. Users can change their password here by clicking "Change Password" in the menu that appears when we click Preferences.
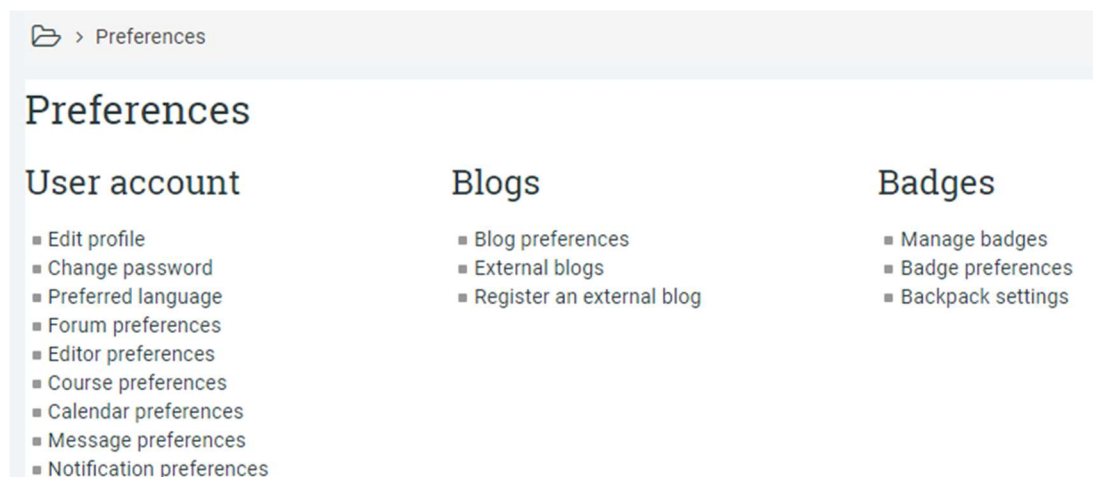
- **Calendar**

  The Calendar displays the upcoming events. The events can be viewable in all courses (created by admin users), in a particular course (course members - created by teachers) or in groups (event viewable only by members of a group - created by teachers). Finally, there are personal events that can be created by a student and are viewable by him.
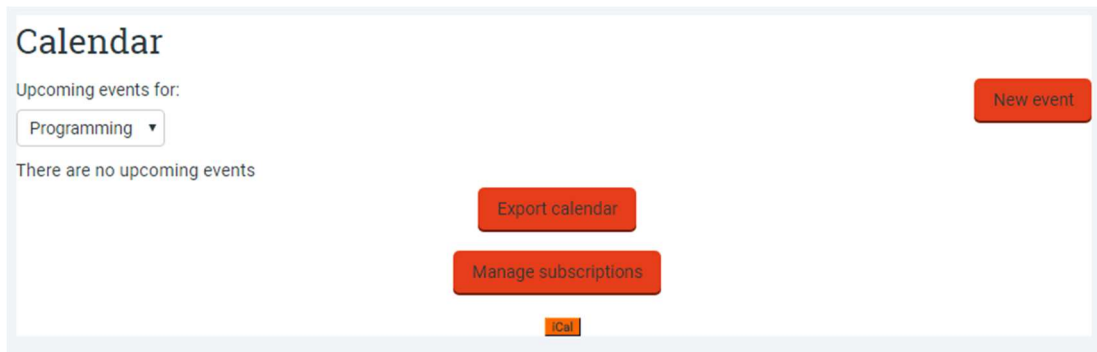
Log Out

By clicking this option the user logs out and returns to the Home Page.