DIGITAL COMPETENCES DEVELOPMENT SYSTEM

Co-funded by the Erasmus+ Programme of the European Union

Digital Competences Development System (DCDS)

ALL DIGITAL

ALL DIGITAL Summit

Bologna, Italy

#DCDS #DigitalCompetences

11 October, 2019

DIGITAL COMPETENCES DEVELOPMENT SYSTEM

DCDS Presentation

- Project introduction
  - Peter Palvolgyi, ALL DIGITAL
- DCD Methodology
  - Stefano Kluzer, AECA
- DCD Environment, DCD System as a whole
  - Achilles Kameas, HOU

DIGITAL COMPETENCES DEVELOPMENT SYSTEM

Project info

- **Project title:** Digital Competences Development System
- **Funding Programme:** ERASMUS+ of the European Union KA3 Forward-Looking Cooperation Projects
- **Duration:** 24 months (from Jan 2018 until Dec 2019)

DIGITAL COMPETENCES DEVELOPMENT SYSTEM

Partnership

ENHANCING DIGITAL SKILLS ACROSS EUROPE
ALL DIGITAL

HELLENIC OPEN UNIVERSITY

LIKTA
LATVIAN INFORMATION AND COMMUNICATIONS TECHNOLOGY ASSOCIATION

eos
FUNDATIA EOS ROMANIA

eaea
EUROPEAN ASSOCIATION FOR THE EDUCATION OF ADULTS

CENTRO STUDI
CITTÀ DI FOLIGNO

fundaciónesplai
ciudadanía comprometida

aeca

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Rationale behind DCDS

DCDS designed, developed and tested an integrated modular system, mapped to DigComp 2.1, to **assess, develop** and **validate** basic digital and transversal skills of adults with low digital skills.

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Specific Objectives

- **Improve** basic digital & transversal competences of digitally **low skilled adults** in a blended learning approach
- **Support** **training providers** in planning and delivering flexible and modular training offers
- **Empower** **policy-makers** and **key stakeholders** from different fields in formulating integrated policies
- **Collect and analyse** **evidence** to validate innovative policies and practices

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Key Results

- Digital Competences Development Methodology
- Digital Competences Development Environment
- Piloting & Evaluation Report
- Policy Influence Kit
- Policy Recommendations

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Pilot Results

- DCDS was tested in **5 countries** through a blended learning approach
- **176 participants** from different target groups completed the course
- **13 trainers** were involved

DCDS pilot evaluation demonstrates the growth of skills and self-confidence of the target audience.

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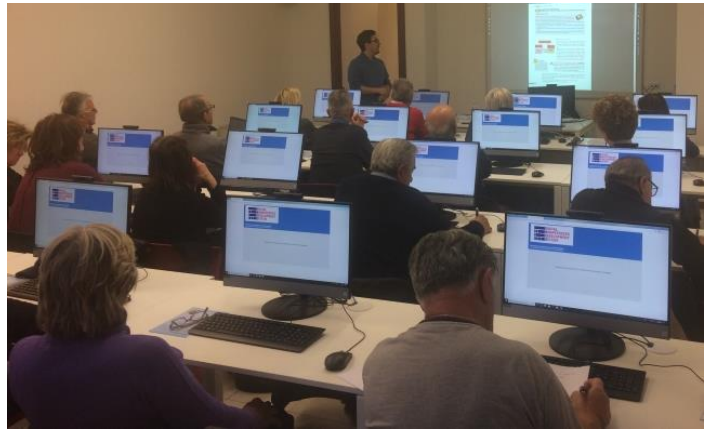
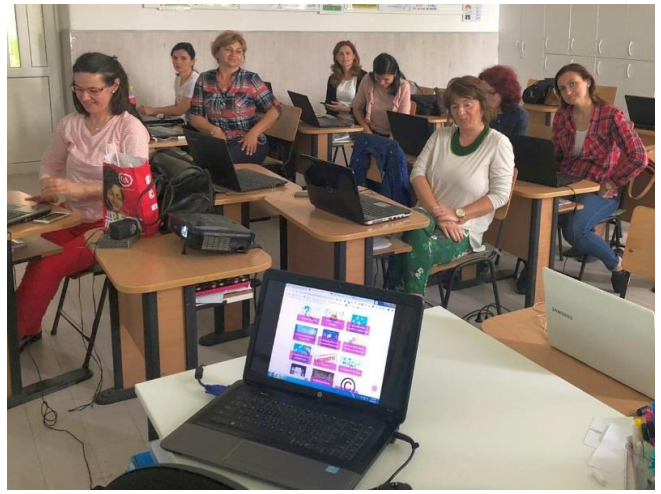
From the field

The course helped me to stabilize some knowledge, become more decisive when using the computer, and **organize better my work duties.**
Trainee from **Greece**





DCDS has been a very enjoyable experience. Now I feel **able to use Internet resources** in my work and in my personal life. Also, jobs involving digital skills are well paid. This course was very welcome!
*Trainee from **Romania***

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From the field

I've gained understanding of how digital solutions can be useful in everyday life. Now I can better work with different programs, search the Internet and even shop online. After attending training, **I feel more confident** working with my computer.
*Trainee from **Latvia***

"The part I most appreciated **was distance learning**, because it was a new, challenging and satisfying experience. **Working in groups** with my classmates was also important, because we shared insights and supported each other"
*Trainee from **Italy***

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Find out more

- Project website: www.dcds-project.eu
- DCDE platform: digitalcompetences.eu
- #DCDS #DigitalCompetences
- #AllDigitalEU

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Presentation of DCD Methodology

STEFANO KLUZER

ALL DIGITAL Summit
Bologna, Italy

11 October, 2019

DIGITAL COMPETENCES DEVELOPMENT SYSTEM

DigComp

5 competence areas

21 competences

COMPETENCE AREAS	COMPETENCES
1. **Information and data literacy**	1.1 Browsing, searching and filtering data, information and digital content 1.2 Evaluating data, information and digital content 1.3 Managing data, information and digital content
2. **Communication and collaboration**	2.1 Interacting through digital technologies 2.2 Sharing through digital technologies 2.3 Engaging in citizenship through digital technologies 2.4 Collaborating through digital technologies 2.5 Netiquette 2.6 Managing digital identity
3. **Digital content creation**	3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.3 Copyright and licences 3.4 Programming
4. **Safety**	4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment
5. **Problem solving**	5.1 Solving technical problems 5.2 Identifying needs and technological responses 5.3 Creatively using digital technologies 5.4 Identifying digital competence gaps

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From DigComp competences to learning outcomes

DigComp **2.5 Netiquette**

To be aware of **behavioural norms and know-how** while using digital technologies and interacting in digital environments.
To **adapt communication strategies** to the specific audience and
… to be aware of **cultural and generational diversity** in digital environments.

How does this translate into an **observable behaviour** that indicates the existence of related skills, knowledge and attitudes? -> **Learning outcomes (LOUTs)**

DCDS identified **95 LOUTs at foundation level**

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LOUTs for self-assessment test

SELF-ASSESSMENT TEST (SAT) on all 21 DigComp competences

- self-assessment questions on almost all LOUTs
- 41 knowledge and ability questions to check key skills/knowledge

Recommender tool suggests learning path (LP) based on SAT results + learner profile

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LOUTs for training design

95 LOUTs -> addressed by **64 LEARNING UNITS**

Set of educational activities sufficient to generate the achievement of one or several LOUTs belonging to a given competence

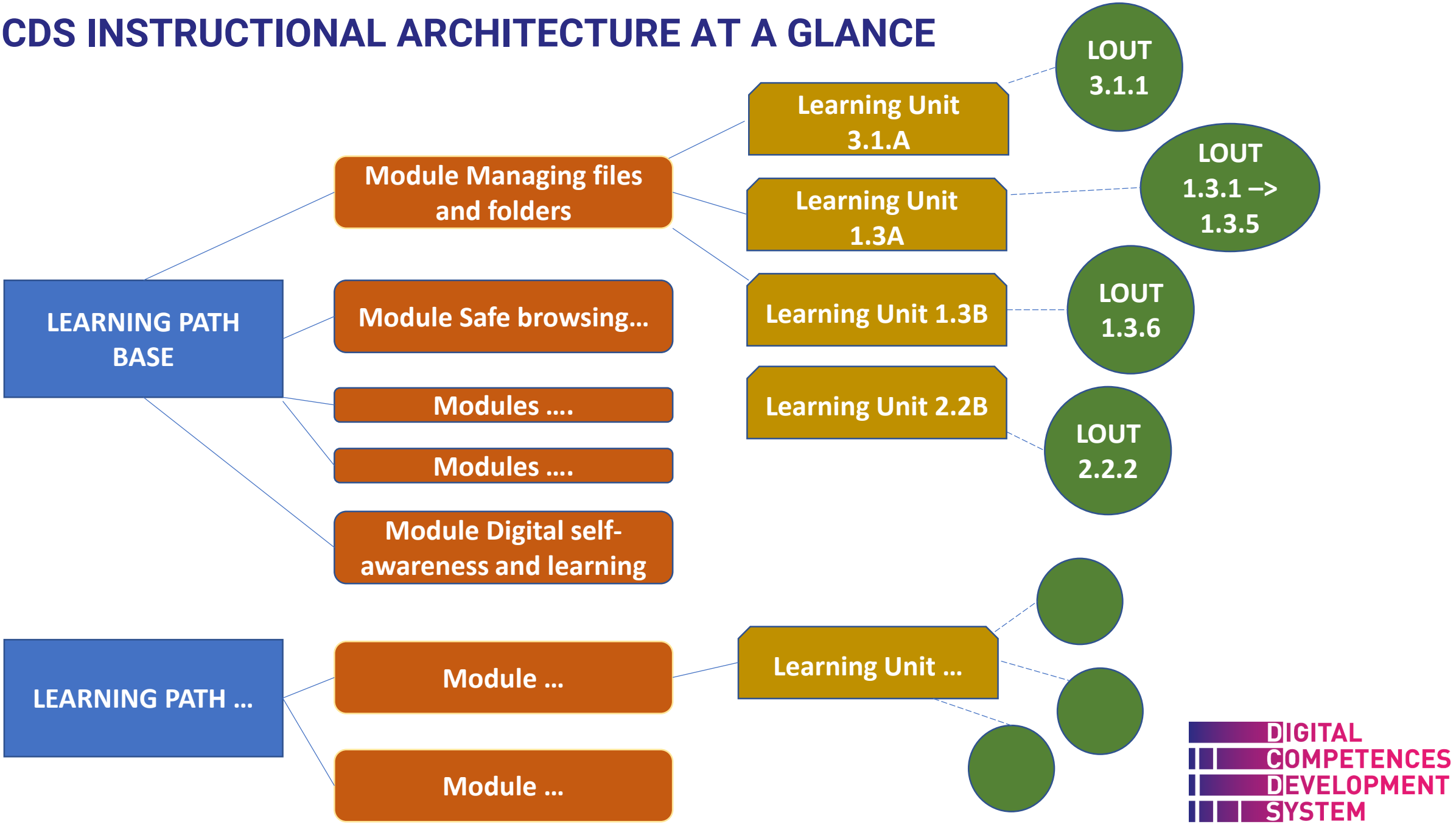
LEARNING UNITS are organized in **19 thematic MODULES**

Set of learning units belonging to a relevant digital topic (e.g. Files and folders management or Creating an account and using e-mail safely)

MODULES are combined into **6 LEARNING PATHS**

Training offer to develop sufficient skills to manage a digital environment or scenario

DCDS INSTRUCTIONAL ARCHITECTURE AT A GLANCE



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DCDS FOUR LEARNING PATHS

39h

LP BASE

Browsing and e-mail	File management online services, safety	Basic ICT operations and self-learning
16h	15h	8h

+ **LP Comm. & Social media** — 14h

+ **LP Digital content creation** — 16h

+ **LP Explore ICT** — 7h

Total estimated/optimistic delivery time (off/online) = approx. 60 hours

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Blended learning in DCDS

Project goal: 40 h. face-to-face + 20 h. distant learning

Why not all distant learning?

- potential DCDS users are people with low digital skills (unfamiliar with…)
- who need/prefer direct contact with teacher/tutor
- (often) also with low autonomous learning capacity

Why some distant learning?

- Flexible delivery and individualised learning
- Gain additional study time (‘homework’)
- Opportunities to learn/practice digital skills
- Learn to use digital learning opportunities

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Learning materials on the DCDE platform

A **minimum 'common learning path' (core content)** made of:

for each Learning Unit/related to LOUTs

- Reading materials on **Key topics**
- 1 to 3 **Learning quizzes** and **Practical exercises** in preparation for …

in each module a **Summative Test**

Teachers can add **auxiliary materials**

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DCDS validation badges

MODULE Badge: issued subject to the outcome of Summative test (>60% score)

LEARNING PATH Badge: issued after passing all Module tests belonging to the LP

COMPETENCE Badge: issued after passing all LUs/Modules related to a given competence (possibly also in different LPs)

LP BADGE BASE

LP BADGE COMMUNICATE

LP BADGE CREATE

LP BADGE EXPLORE

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HELLENIC OPEN UNIVERSITY

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Presentation of DCD Environment

Achilles Kameas
Hellenic Open University

ALL DIGITAL Summit
Bologna, Italy

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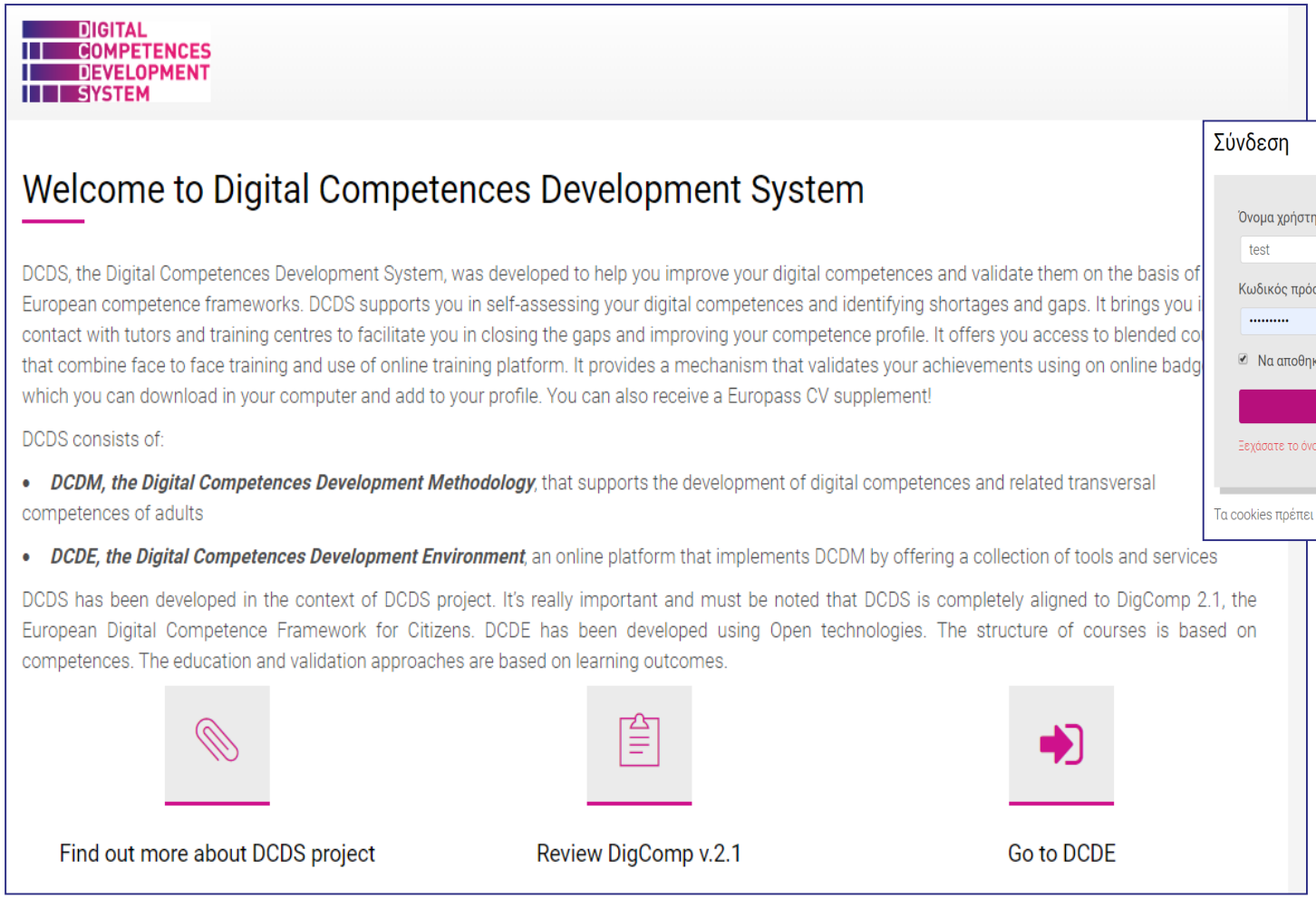
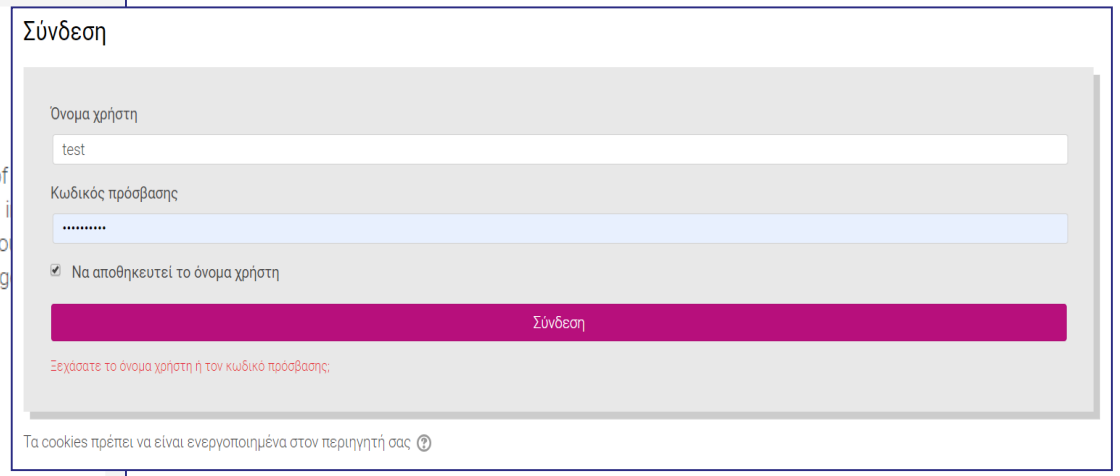
The platform





https://digitalcompetences.eu/

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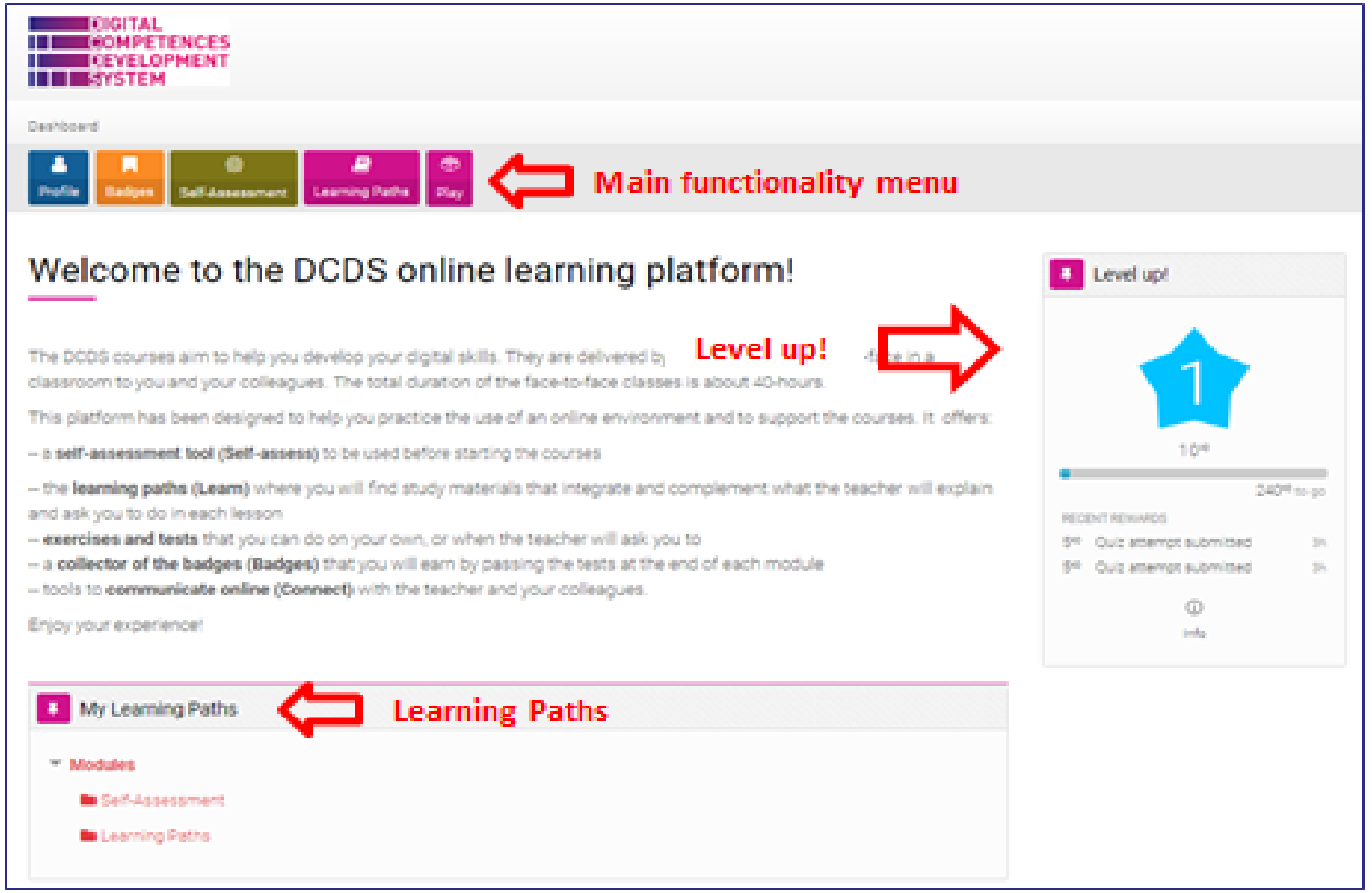
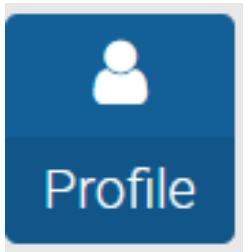
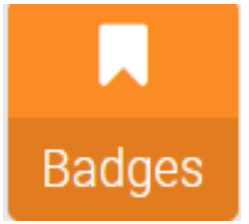
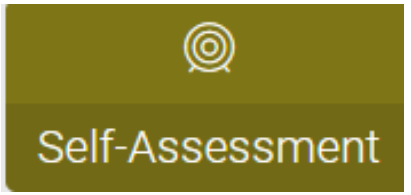
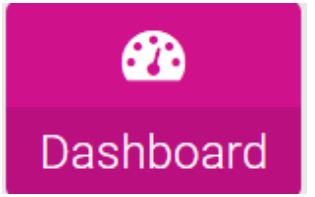
DCDE dashboard

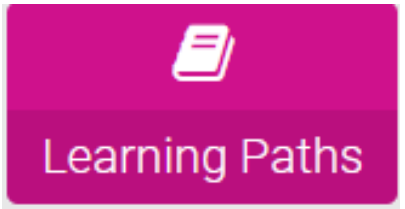












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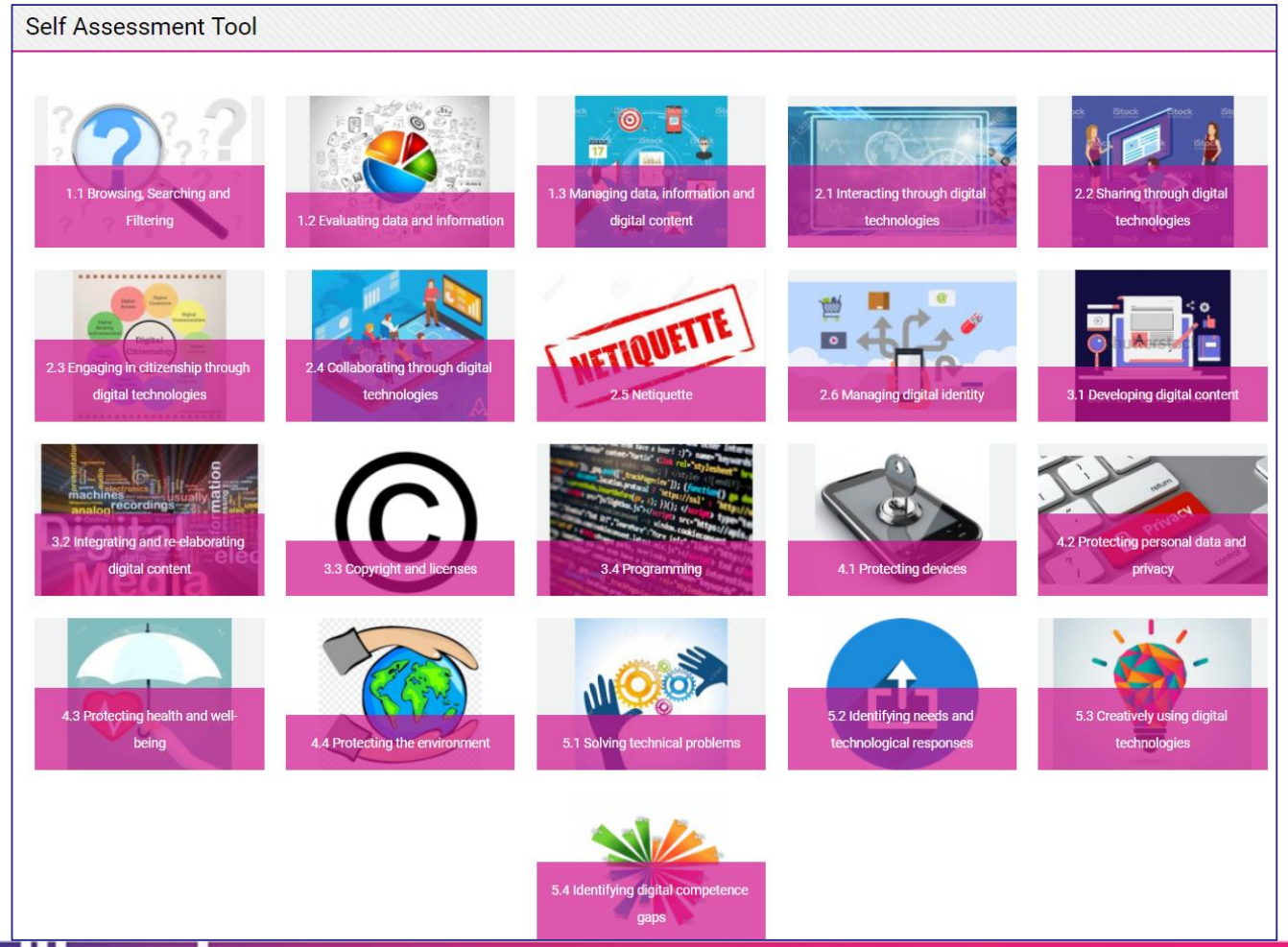
Self-Assessment

SAT



DCDE includes two types of assessment questions:

- *Proper Self-Assessment questions (SAs) through the Self-Assessment (SA) test, where learners are asked to assess their own proficiency in a given area, and*
- *Knowledge & Ability questions (KAs) through the Knowledge and Ability (KA) test, where they have to give the correct answer and prove their knowledge.*

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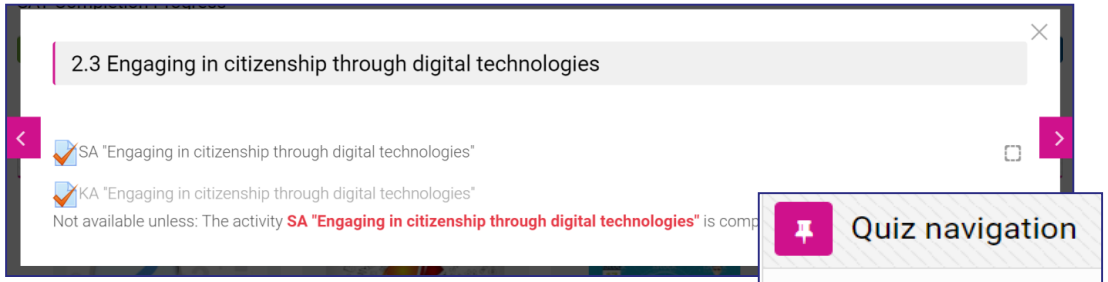
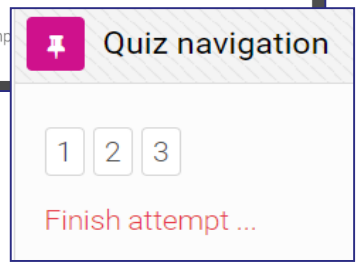
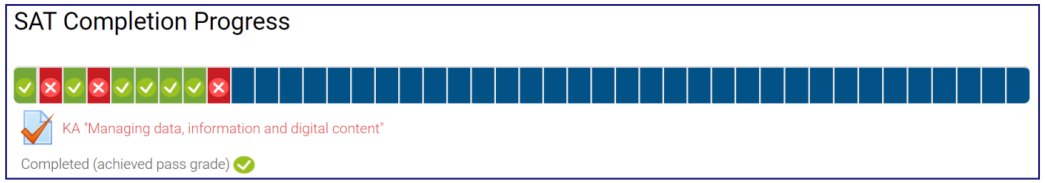
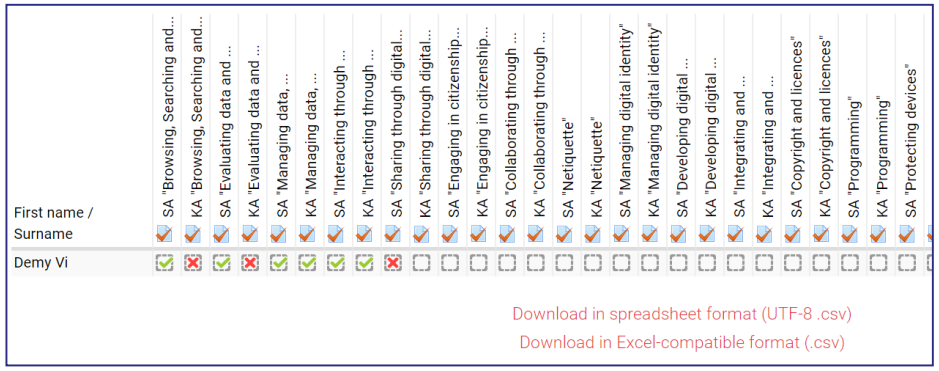
Self-Assessment

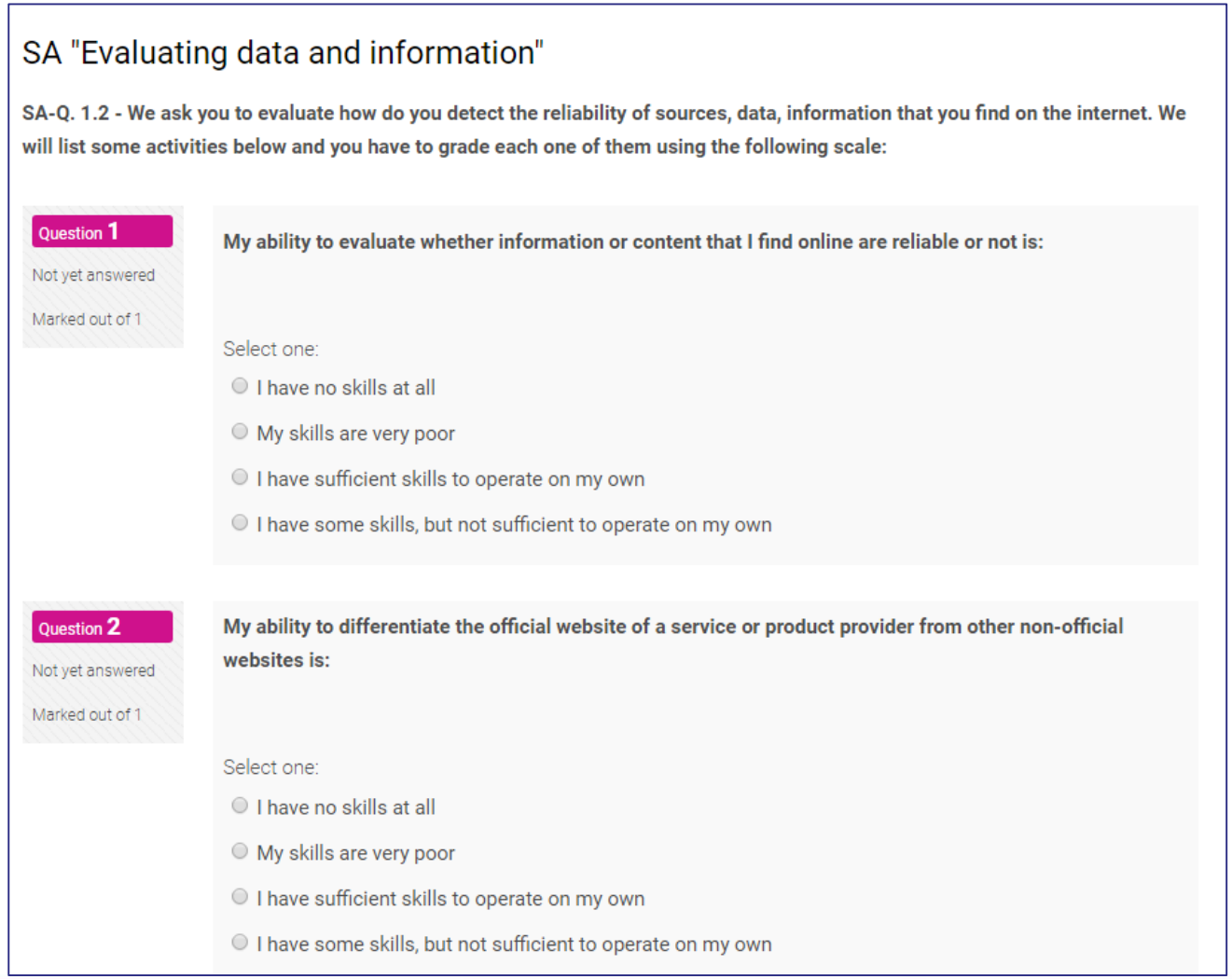
SAT











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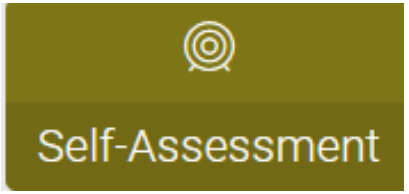

Recommender

Groups: All participants

You can enrol/unenroll learners to/from Learning Paths only if he/she has completed the Self-Assessment.

Learner	Completion Status	LP Base need	LP Comm need	LP Content need	LP ICT need
STD DEMO	Completed	100% *(Enrol)*	80% *(Enrol)*	95% *(Unenroll)*	90% *(Enrol)*
STD DEMO 1	Completed	93.33% *(Unenroll)*	85% *(Enrol)*	80% *(Enrol)*	90% *(Unenroll)*
TUT DEMO 1	Not completed yet *(Complete now)*	93.33%	80%	80%	80%
STD DEMO 2	Not completed yet *(Complete now)*	93.33%	80%	80%	80%

DIGITAL COMPETENCES DEVELOPMENT SYSTEM

Self-Assessment

Recommender

Progress

First name

All

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

Surname

All

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

First name / Surname	Email address	SA "Browsing, Searching and...	KA "Browsing, Searching and...	SA "Evaluating data and ...	KA "Evaluating data and ...	SA "Managing data, ...	KA "Managing data, ...	SA "Interacting through ...	KA "Interacting through ...	SA "Sharing through digital...	KA "Sharing through digital...	SA "Engaging in citizenship...	KA "Engaging in citizenship...	SA "Collaborating through ...	KA "Collaborating through ...	SA "Netiquette"	KA "Netiquette"	SA "Managing digital identity"	KA "Managing digital identity"	SA "Developing digital ...	KA "Developing digital ...	SA "Integrating and ...	KA "Integrating and ...	SA "Copyright and licences"	KA "Copyright and licences"	SA "Programming"	KA "Programming"	SA "Protecting devices"	KA "Protecting devices"	SA "Protecting personal ...	KA "Protecting personal ...	SA "Protecting health and ...	KA "Protecting health and ...	SA "Protecting the ...	KA "Protecting health and ...	SA "Solving technical ...	KA "Solving technical ...	SA "Identifying needs and ...	KA "Identifying needs and ...	SA "Creatively using ...	KA "Creatively using ...	SA "Identifying digital ...	KA "Identifying digital ...
STD DEMO	pandreas82@gmail.com	✓	✗	✗		✓	✗			✓										✓														✓									
STD DEMO 1	pandreas@upatras.gr			✓	✓	✗		✗																																			
STD DEMO 2	aaa@gmail.com																																										

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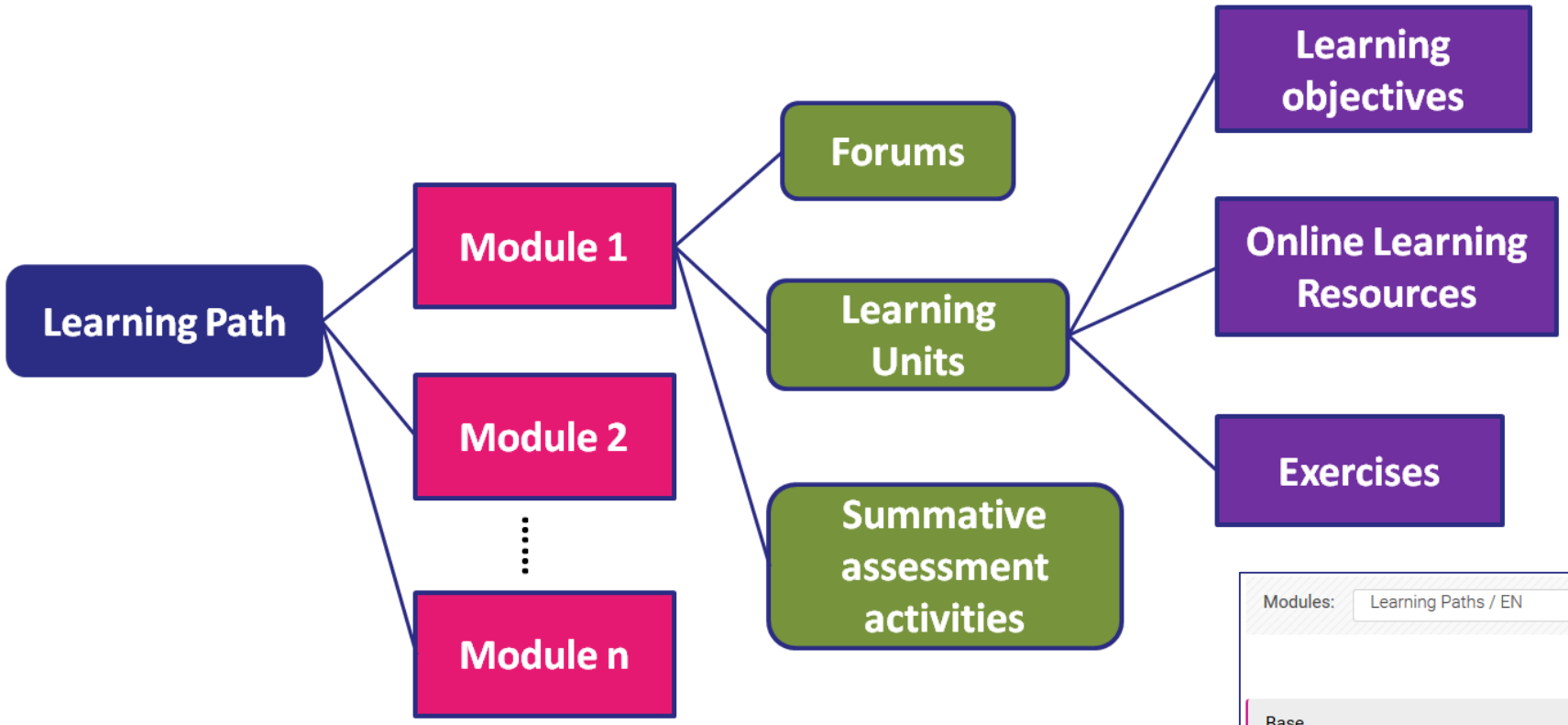
Learning Paths

Learning paths



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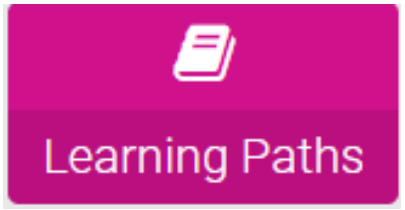
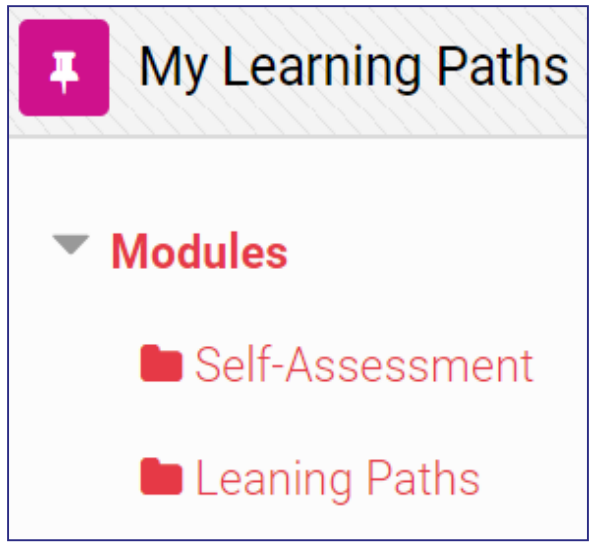
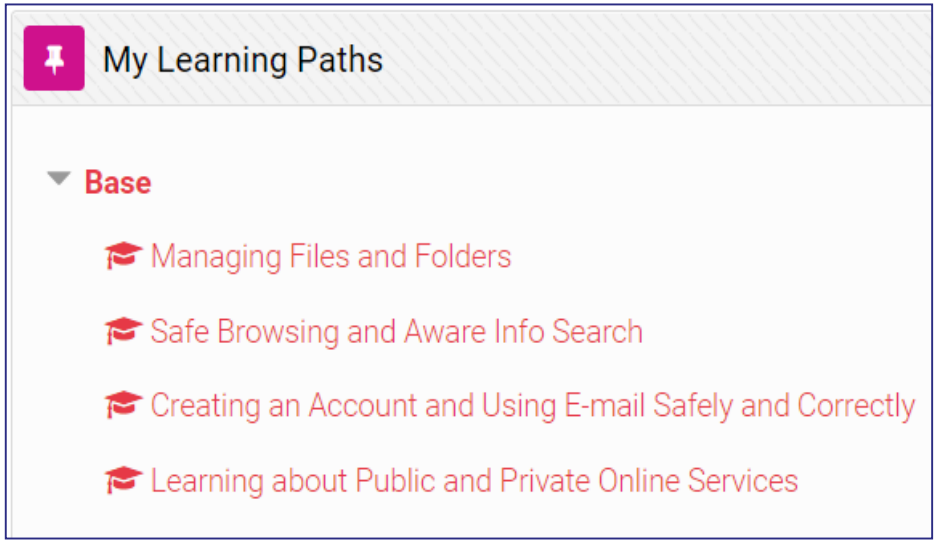


Learning paths





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Learning Paths

Learning

Announcements

Forum for "Managing Files and Folders"

Learning Units 1 2 3 4 Summative ...

Software Overview

After studying this material, you will be able to

1. Identify (through their icons) and describe the purpose/basic functionality of commonly used software applications

Online Learning

Key concepts for Software Overview

Exercises

Learning Quiz

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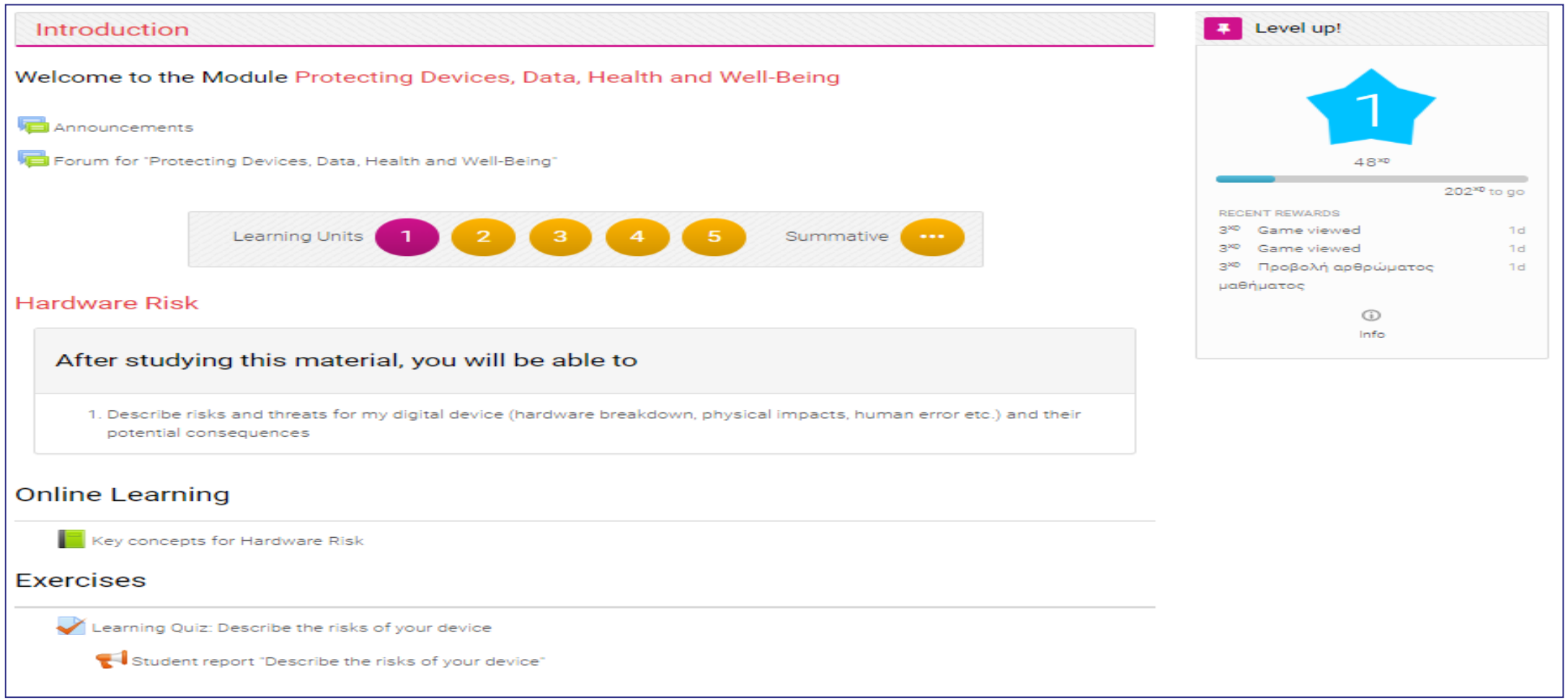
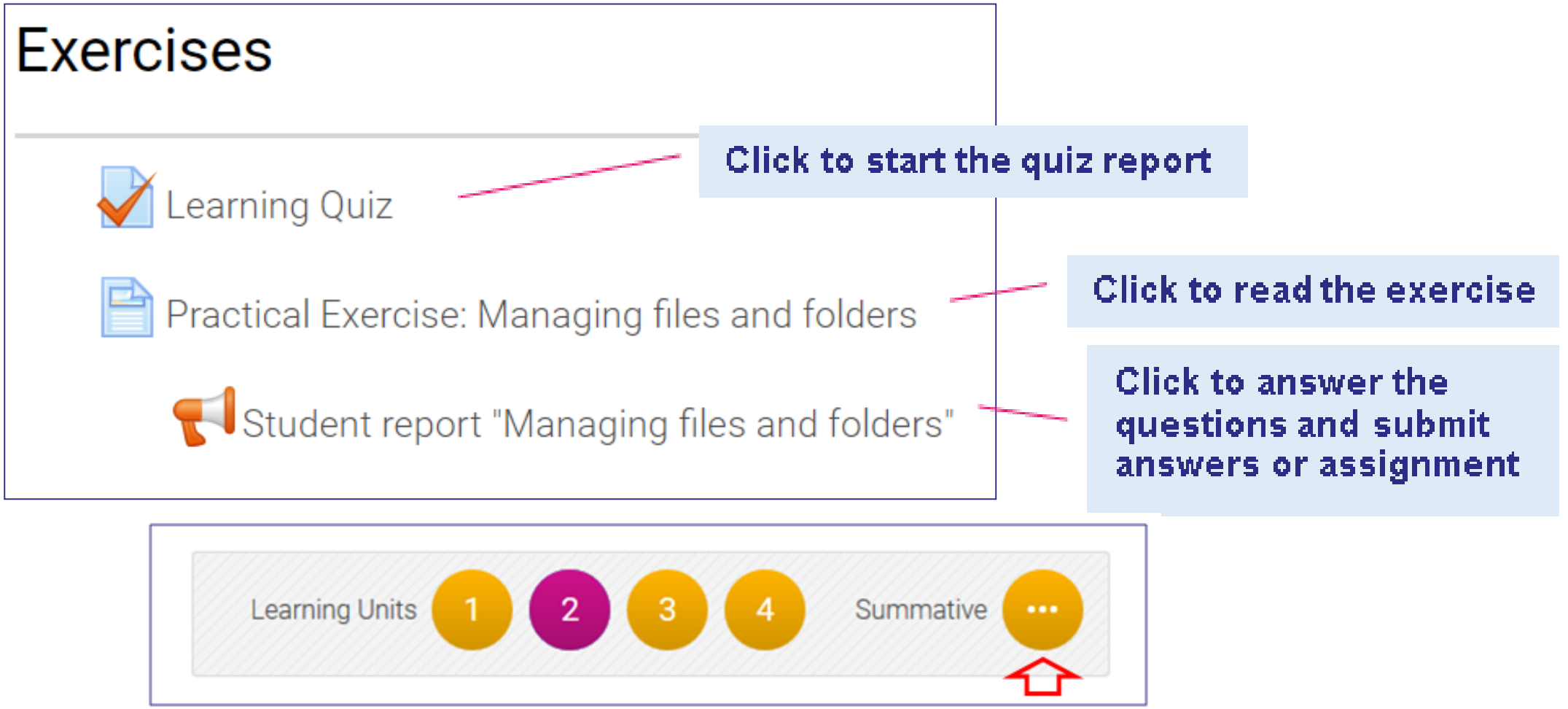
Learning Paths

Learning



Learning Paths

Assessment



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Learning Paths

Assessment

Icons

Question 1

Not yet answered

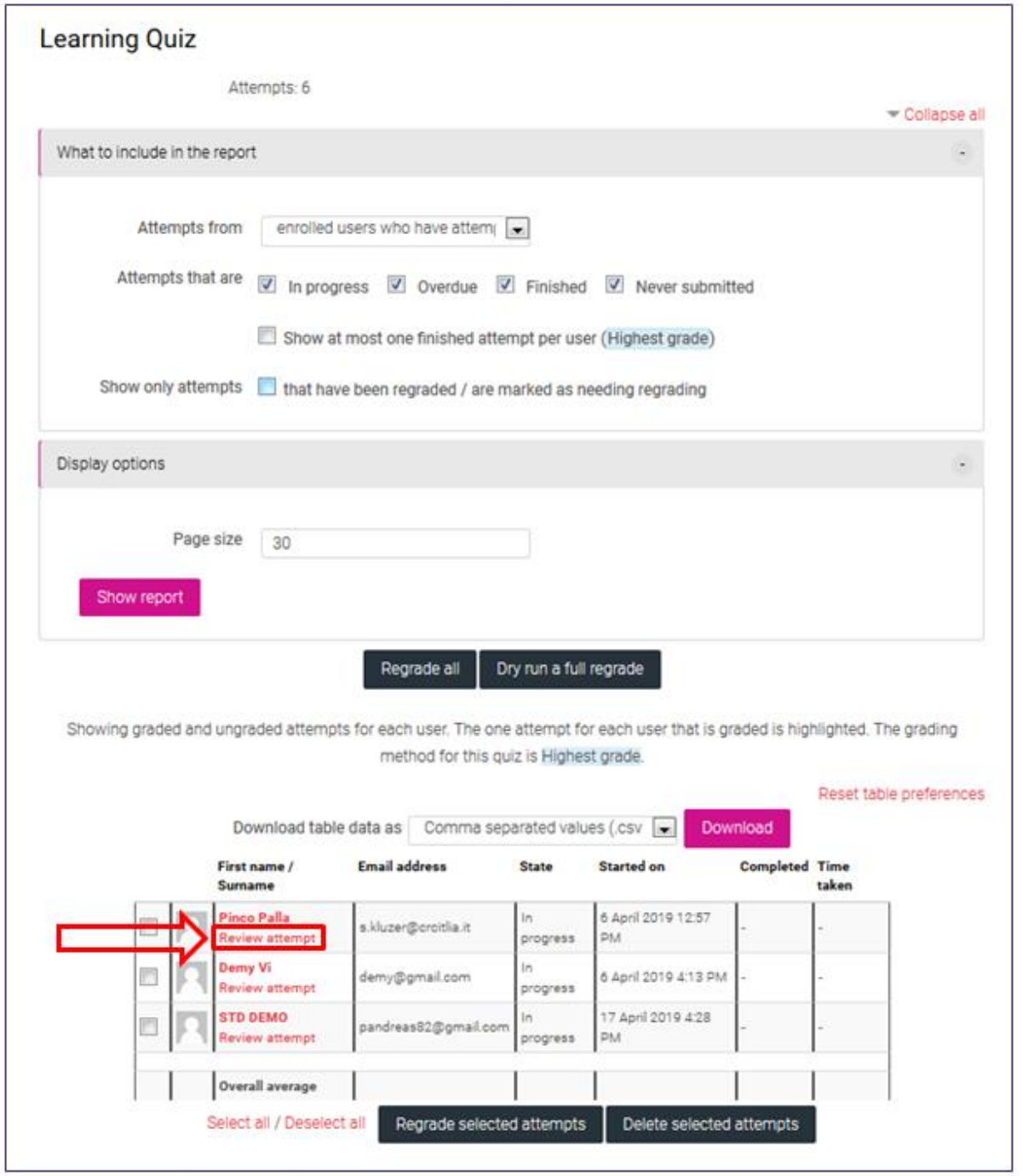
Marked out of 18.0

Flag question

Edit question

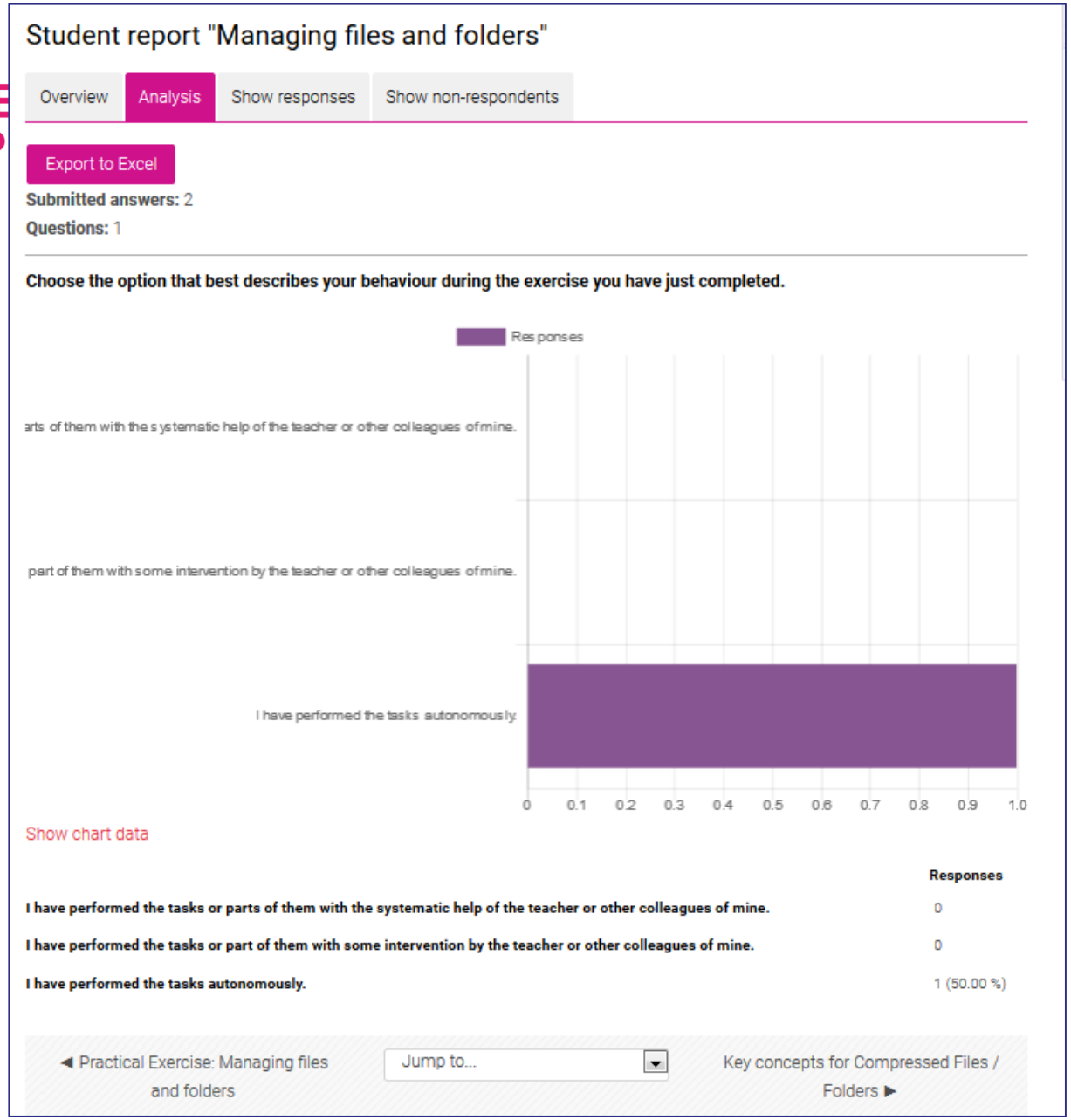
Look at the left column below: in each row, there is only one icon with the file format that can be opened by the application on the right column. For each row on the left, identify the correct file icon and drag and drop it into the appropriate applications on the right

Assessment (teacher)



DIGITAL COMPETE DEVELOP SYSTEM

Assessment (teacher)



Grading (teacher)

Select	User picture	First name / Surname	Email address	Status	Grade	Edit	Last modified (submission)	Online text	File submissions	Submi comm
		Student Demo	pandreas@ecomet.eap.gr	Submitted for grading	Grade -	Edit	Thursday, 11 April 2019, 5:06 PM	rw		Comm (0)
		STD DEMO	pandreas82@gmail.com	Draft (not submitted) Graded - follow up submission received	Grade 54.00 / 54.00	Edit	Tuesday, 9 April 2019, 5:18 PM	dd		Comm (0)
		Spiros Borotis	borotis@daissy.eap.gr	No submission	Grade -	Edit	-			Comm (0)
		David Ford	david.ford@eos.ro	No submission	Grade -	Edit	-			
		Elev Silitor	elev.test@eosro.info	No submission	Grade -	Edit	-			
		Studenta Silitoare	studenta.silitoare@eosro.info	No submission	Grade -	Edit	-			
		Pinco Palla	s.kluzer@crcitlia.it	No submission	Grade -	Edit	-			
		Victorita Popescu	Victorita@yahoo.com	No submission	Grade -	Edit	-			
		Dace	b_dace@inbox.lv	No	Grade	Edit	-			

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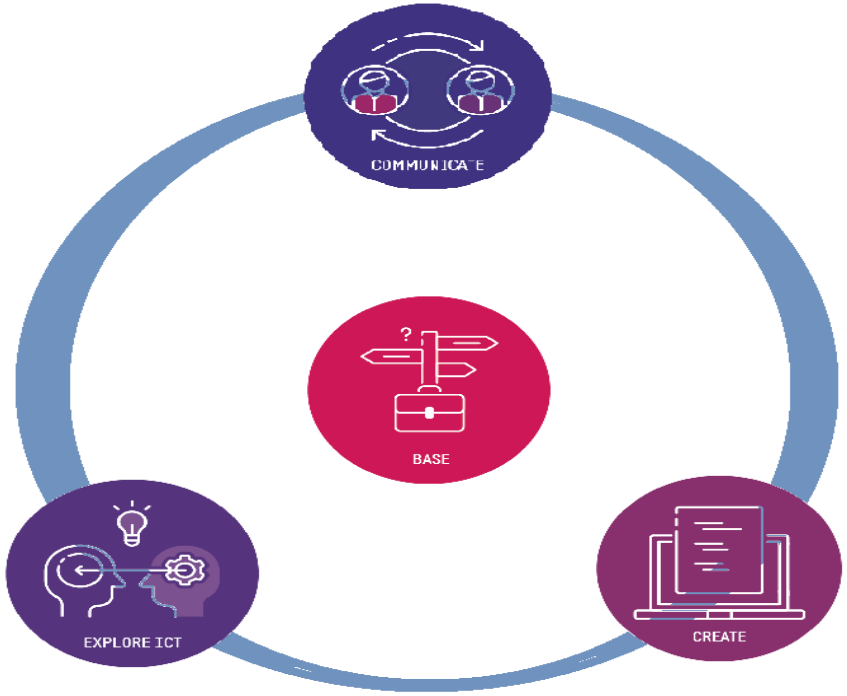
Badges



Path

Module

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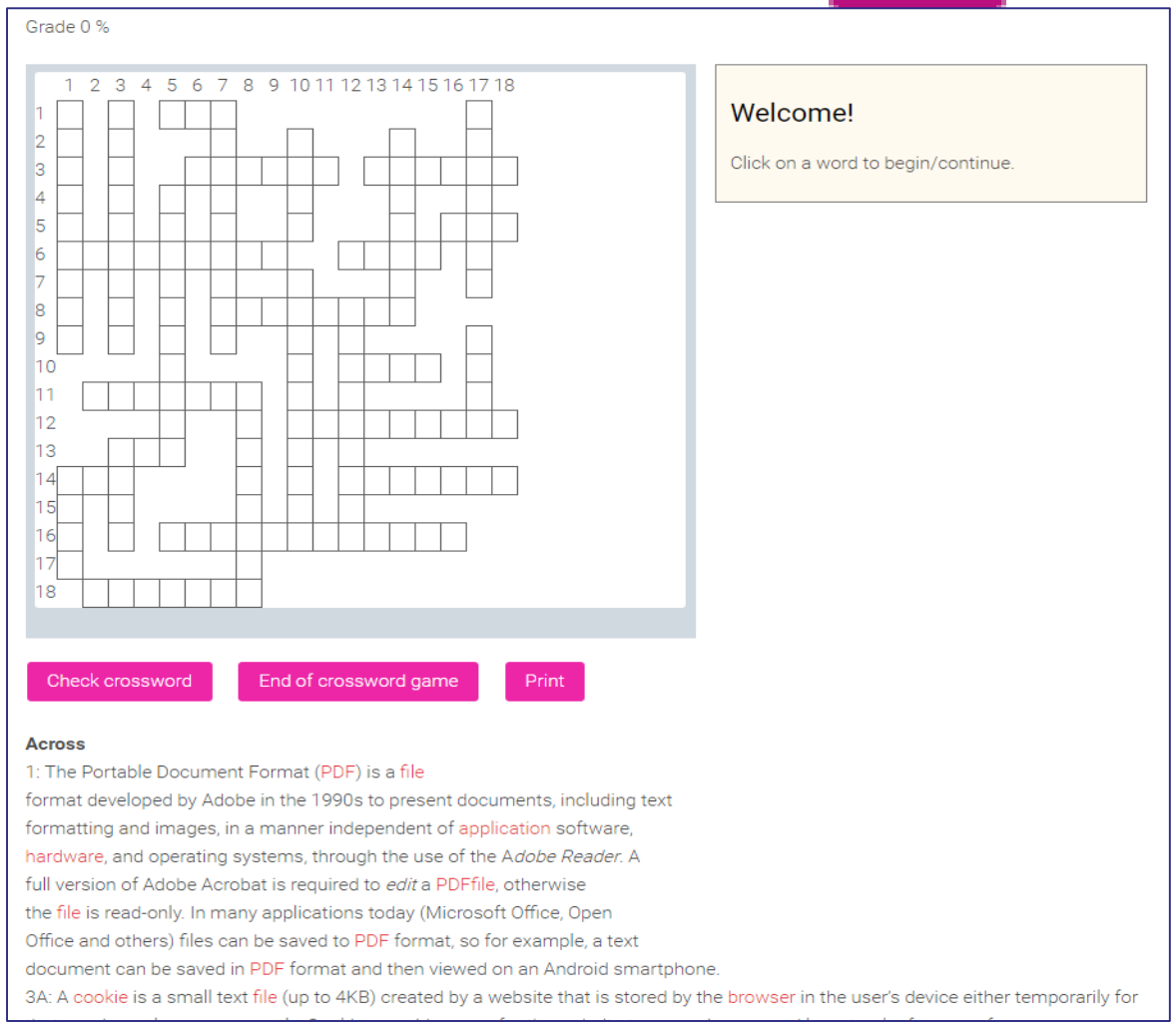
Games

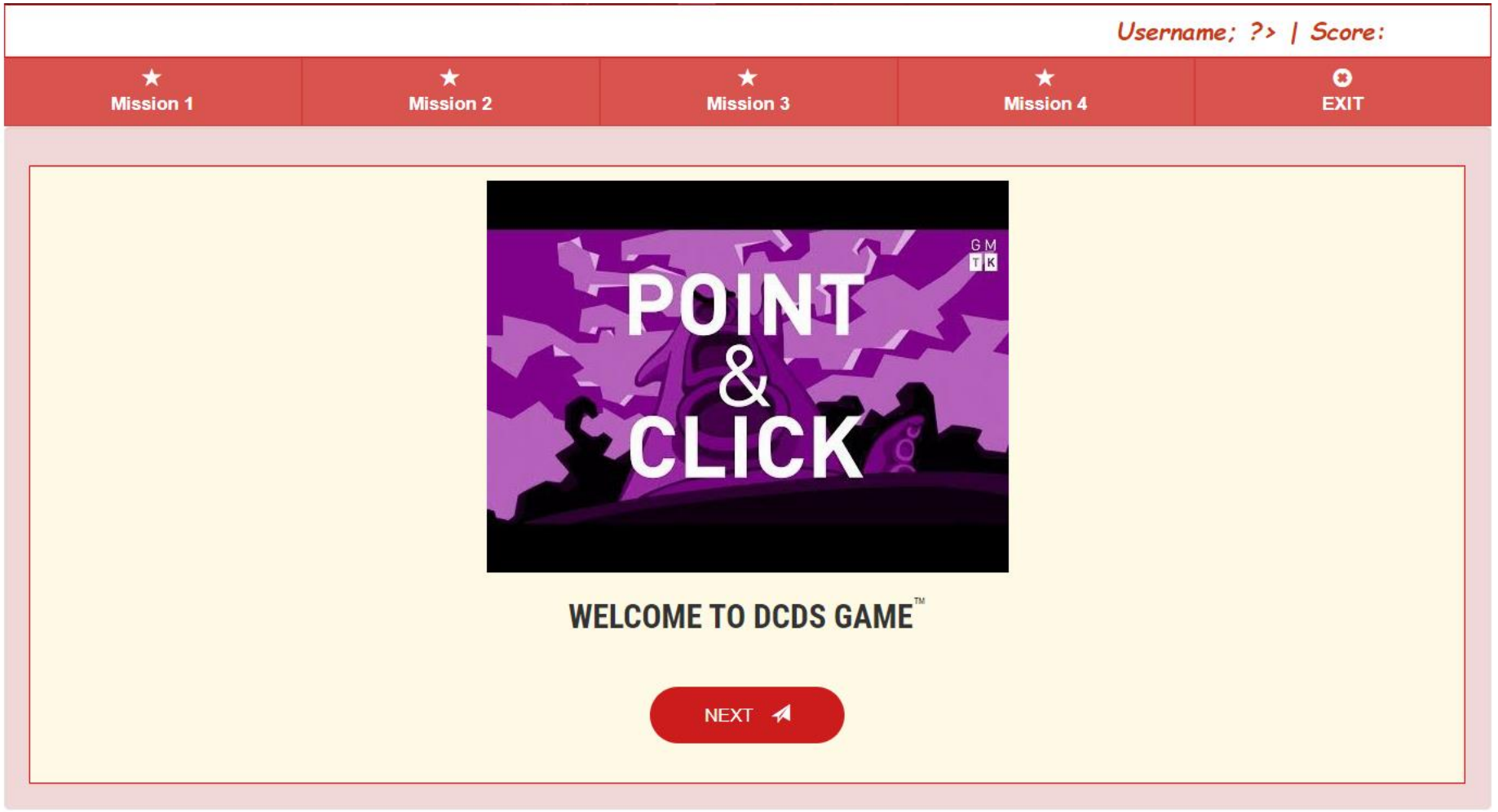
Games

Crossword based on Critical Words

Cryptex game based on critical words

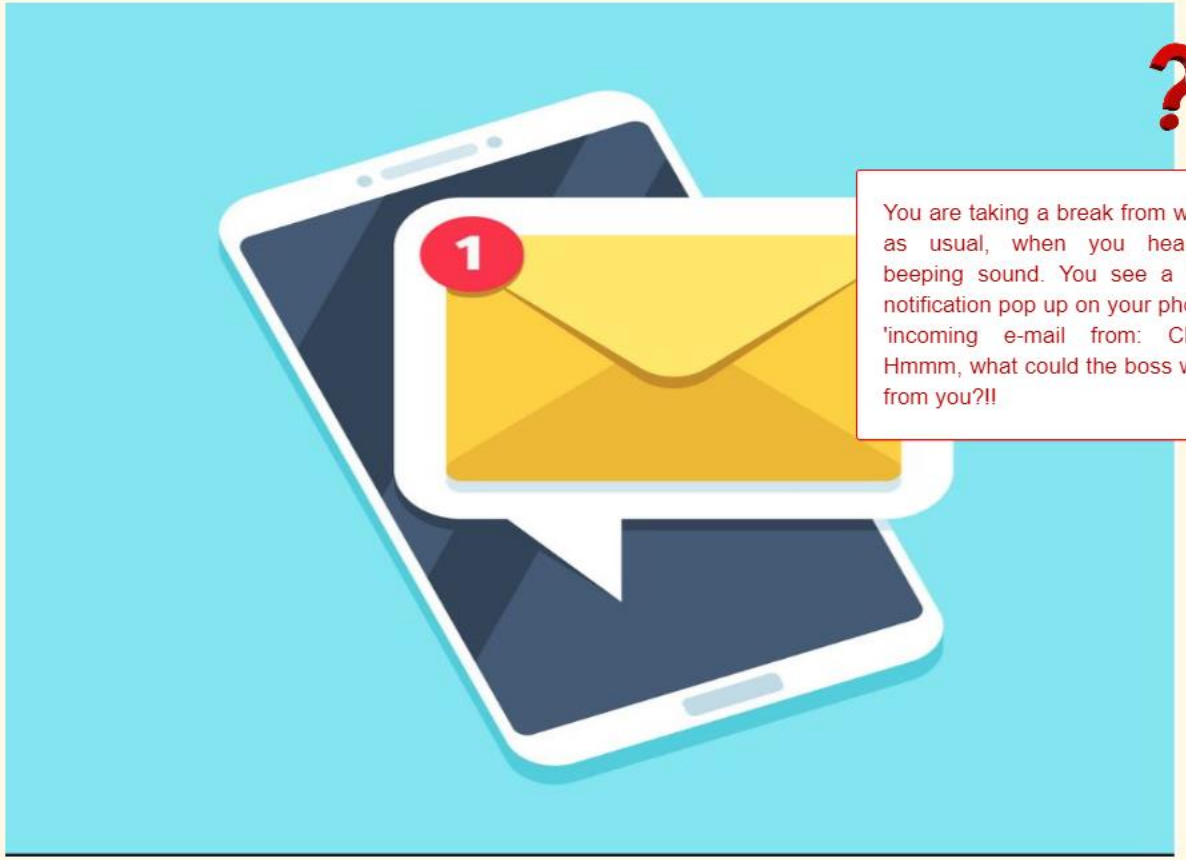


Games


Username; ?> | Score:
Mission 1
Mission 2
Mission 3
Mission 4
EXIT
POINT & CLICK
WELCOME TO DCDS GAME™
NEXT

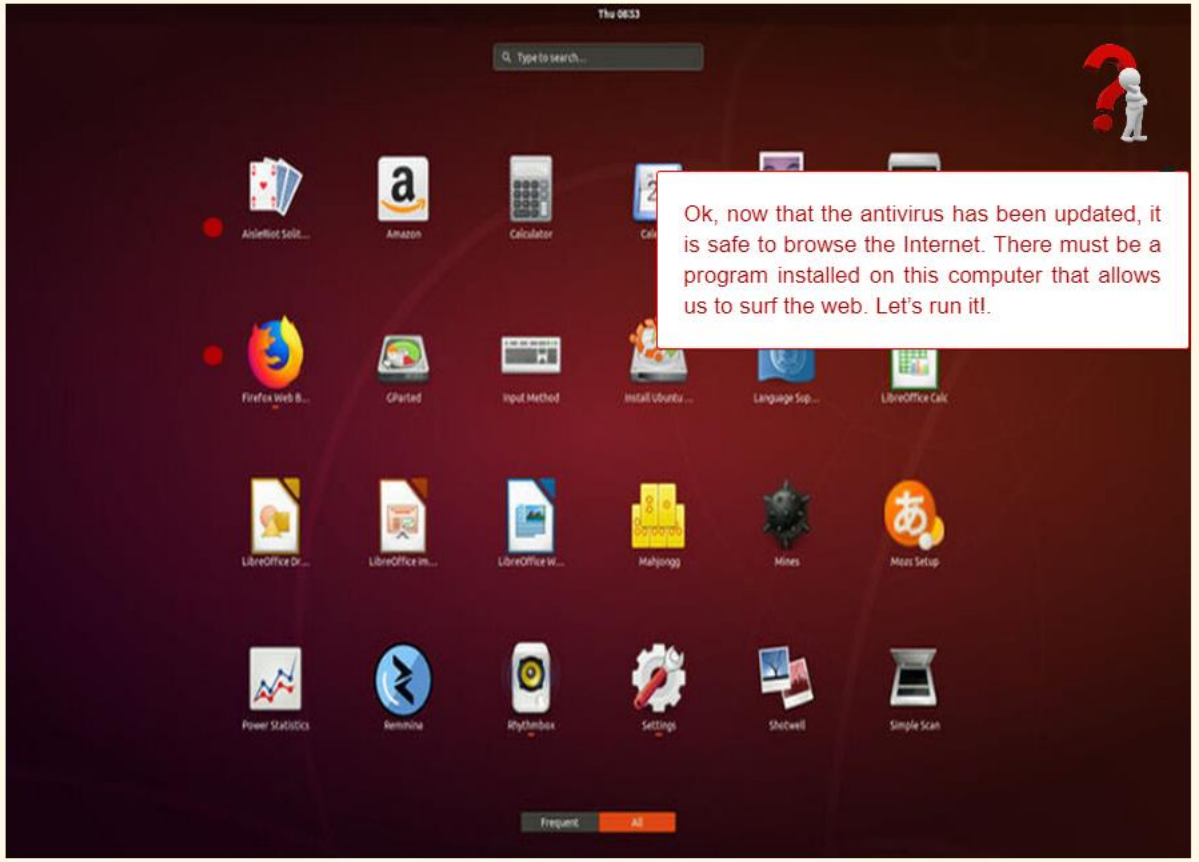
Play

Games


1
You are taking a break from work, as usual, when you hear a beeping sound. You see a little notification pop up on your phone: 'incoming e-mail from: CEO'. Hmmm, what could the boss want from you?!!
NEXT

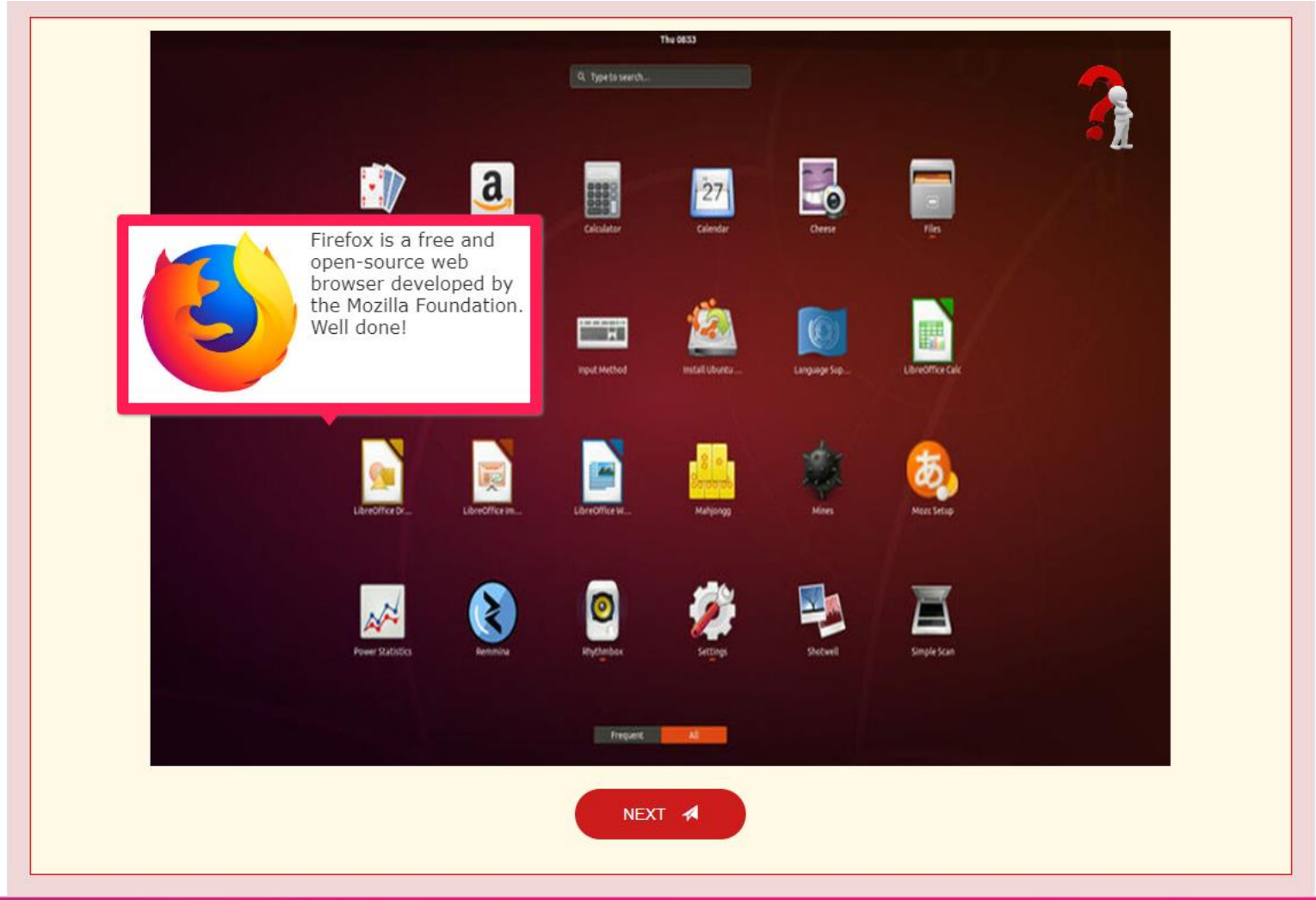
Play

Games


Ok, now that the antivirus has been updated, it is safe to browse the Internet. There must be a program installed on this computer that allows us to surf the web. Let's run it!.
NEXT

Play

Games


Firefox is a free and open-source web browser developed by the Mozilla Foundation. Well done!
NEXT

DIGITAL COMPETENCES DEVELOPMENT SYSTEM

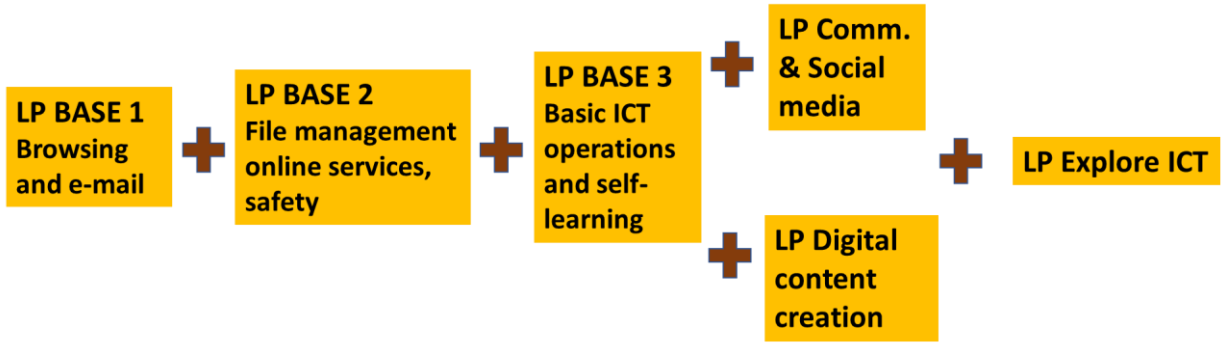
DCDS – The system

- DCDM
- DCDE
- Handbooks
  - For learning provider
  - For trainer
- CV supplement for trainee

DIGITAL COMPETENCES DEVELOPMENT SYSTEM

DCDM – The methodology

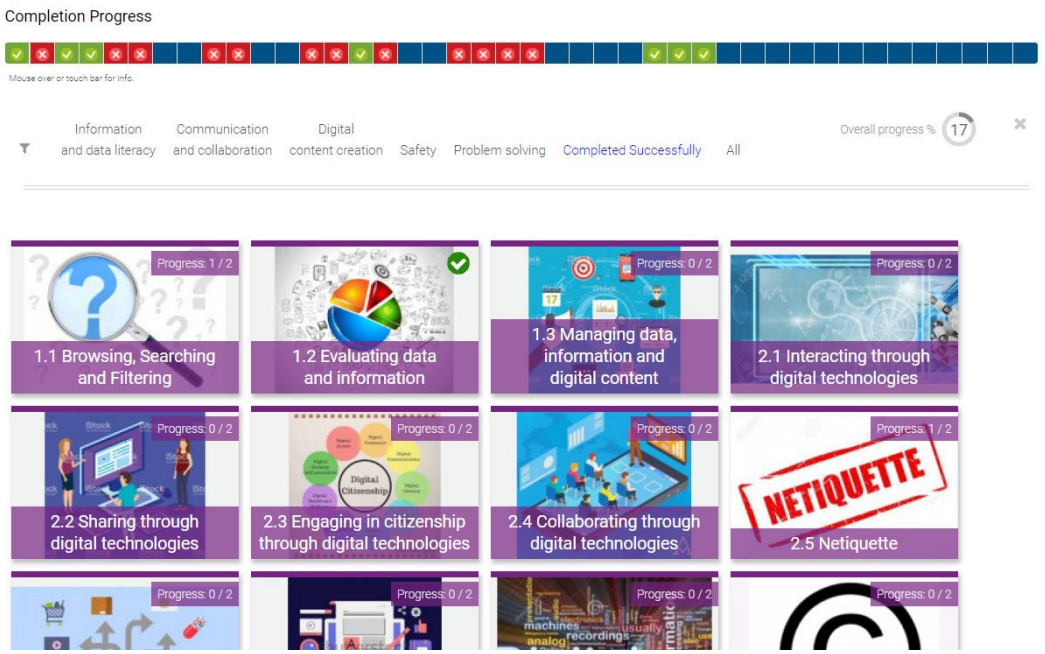
- Adopts DigComp 2.1
- Based on learning outcomes
- Uses online learning material
- Includes self-assessment and assessment
- Implements blended learning
- Supports learning paths
  - BASE
  - ALT
- Awards online badges



DIGITAL COMPETENCES DEVELOPMENT SYSTEM

DCDE – The platform

- SAT
- Recommender tool
- Online learning environment
  - Embedded learning content
  - Auxiliary content
  - Game-like content
  - Badges
- Communication tool
- Moodle based



Grade item	Grade	Range	Percentage
Self-Assessment Tool EN			
SA "Browsing, Searching and Filtering"	1	0–8	13 %
KA "Browsing, Searching and Filtering"	0	0–5	0 %
SA "Evaluating data and information"	1	0–4	25 %
KA "Evaluating data and information"	2	0–2	100 %

DIGITAL COMPETENCES DEVELOPMENT SYSTEM

Ideas for exploitation

- Take-up integrated DCDS and adapt to national context
- Adopt methodology
- Reuse content items (e.g. assessment quizzes)
- Add new content (embedded, auxiliary)
- Extend to higher DigComp competence levels
- Add / re-compose new learning paths (e.g. browsing and email, safety and security)
- Use tools independently (e.g. SAT)
- Add new tools (e.g. games)
- Give policy recommendations (e.g. to stakeholders / policy makers)

THANK YOU!

http://www.dcds-project.eu/

#DCDS #DigitalCompetences