J	,	4.8.2023 15:00 C	CEST		Notes: Confusions:
From		-	Time		Inputs were not reflected right away after just changing the HDL.
	0:15:10	0:15:12 Total		0:00:02 2	Later mentioned they already tried the software previously - data disregarded.
		First Task			
From			Time		
	0:15:13	0:15:41	(0:00:28	
		Total		28	
		Second Task			
From			Time		
	0:15:44	0:16:47	(0:01:03	
		Total		63	
_		Third Task	_		
From			Time	0.01.14	
	0:16:50	0:18:04 Total	,	0:01:14 74	
		Fourth Task			
From			Time		
	0:18:06	0:19:13	(0:01:07	
		Total		67	
М		4.8.2023 16:00 C Prep	EST		Notes: Rushed through instructions and video.
From		-	Time		Recorded video from the session had some encoding problems but it was still possible to capture key
	0:12:53	0:13:05	(0:00:12	moments. Started with Nand, later returned to the first example.
		Total		12	· ·
		First To 1			Confusions: 1. Problems understanding usable gate interfaces.
From		First Task To	Time		
	0:12:23	0:12:53		0:00:30	Praised the integration of automated tests.
	0:13:05	0:18:13		0:05:08	Said they would be hesitant to try the Java software as it would require changes to their Ubuntu Linux
	0:20:20	0:20:30		0:00:10	setup.
		Total		348	
		Second Task			
From			Time	2.01.52	
	0:18:14	0:20:07 Total	(0:01:53 113	
				113	
Гиа. а.		Third Task	Time :		
From	0:20:40	To 0:21:26	Time	0:00:46	
	0.20.40	0:21:26 Total	,	46	
		Fourth Task			
From			Time		
	0:21:29	0:22:02	(0:00:33	
		Total		33	
P		4.8.2023 20:00 C	CEST		Notes:
		Prep			Confusions:
From			Time		 Could not launch Hardware Simulator - missing javaw executable. Had to ask for help. Tried to use "Run" instead of "Evaluate" for manual testing of operation.
	0:06:17	0:06:47		0:00:30	2. The to dee than indicate of Evaluate for manual testing of operation.
	0:07:36	0:07:53		0:00:17	
	0:08:21	0:11:14 Total	(0:02:53 220	
		First Task			

From		То	Time		
	0:06:17	0:06:47		0:00:30	
	0:12:52	0:14:20		0:01:28	
	0:14:57	0:15:08		0:00:11	
	0:15:12	0:15:17		0:00:05	
	0:15:53	0:16:03		0:00:10	
	0:17:44	0:17:50		0:00:06	
	0:18:26	0:18:34		0:00:08	
	0:18:49	0:18:51		0:00:02	
	0:19:53 0:20:27	0:20:16 0:20:53		0:00:23 0:00:26	
	0:21:21	0:21:49		0:00:28	
	0:22:03	0:22:35		0:00:20	
		Total		269	
		Second Task			
From			Time		
	0:24:11	0:30:17		0:06:06	
		Total		366	
		Third Task			
From		То	Time		
	0:30:19	0:32:57		0:02:38	
		Total		158	
		Fourth Task			
From		То	Time		
	0:32:59	0:36:08		0:03:09	
		Total		189	
P - 2.		4.8.2023 20:00 (CEST		Notes:
		Prep			Confusions: none
From		То	Time		Was interested in trying both groups. Originally Group B.
	0:38:23	0:38:35		0:00:12	
		Total		12	Was pleasently surprised all of tests are executed instantly.
		First Task			Said they would much rather use the web solution.
From		То	Time		
	0:38:36	0:39:30		0:00:54	
		Total		54	
		Second Task			
From		То	Time		
	0:39:31	0:40:13		0:00:42	
		Total		42	
		Third Task			
From		То	Time		
	0:40:14	0:41:00		0:00:46	
		Total		46	
		Fourth Task			
From		То	Time		
	0:41:02	0:41:45		0:00:43	
		Total		43	
Υ		4.8.2023 21:00 (CEST		Notes:
		Prep			Highly motivated. Very attentive despite the very late hours when the session was held. Afraid o
From		То	Time		making errors.
	0:10:36	0:10:45		0:00:09	Confusions:
		Total		9	Confusion around the syntax.
		First Task			

From	-	То	Time	
	0:10:45	0:17:39		0:06:54
		Total		414
		Second Task		
From	-	То	Time	
	0:17:40	0:24:00		0:06:20
		Total		380
		Third Task		
From	-	То	Time	
	0:24:01	0:26:37		0:02:36
		Total		156
		Fourth Task		
From	-	То	Time	
	0:26:39	0:28:46		0:02:07
		Total		127
s	í	5.8.2023 21:00 (CEST	
		Prep		
From		То	Time	
	0:10:45	0:12:25		0:01:40
	0:13:32	0:15:06		0:01:34
	0:16:47	0:19:36		0:02:49
		Total		363
		First Task		
From		То	Time	
	0.22.13	0.25.11		0.01.58

0:23:13 0:25:11 0:01:58 0:25:35 0:25:55 0:00:20 0:29:10 0:01:23 0:30:33 0:31:24 0:31:50 0:00:26 0:32:27 0:33:10 0:00:43 0:35:13 0:36:06 0:00:53 Total 343

Second Task

From	To	Tim	e
0:33:37 [1]		0:42:27	0:08:50
		Total	530

Third Task

From	To)	Time
	0:42:34	0:48:04	0:05:30
		Total	330

Fourth Task

From	Т	Ō	Time
	0:48:08	0:53:27	0:05:19
		Total	319

S - 2. 5.8.2023 21:00 CEST

	FIER	,
From	To	Time

From	_	Го	Time
	0:57:24	0:58:20	0:00:56
		Total	56

First Task

⊢rom	10	Tim	e
	0:58:23	1:00:01	0:01:3
			_

38 98 Total

Notes:

Was a bit tired.

Confusions:

- 1. Did not have java installed. Was trying to find it in the downloaded bundle. I had to help. Slow download speed meant waiting a minute or two.
- 2. Confused around the use of Run vs Eval.
- 3. File naming problems.
- 4. Problems with .txt extension automatically added by Windows.

Spent a lot of time switching between windows - different Notepad windows and the Hardware Simulator.

Notes:

Orginally from Group B. Wanted to try the other group as well. Was a bit tired.

Confusions:

1. Did not understand it's needed to add PARTS. At first thought the embedded HW simulator was read-only.

Said it felt much faster.

Liked how everything happened automatically.

		Second Task			
From			Time		
	1:00:16	1:01:29		0:01:13	
		Total		73	
		Third Task			
From			Time		
	1:01:30	1:02:39		0:01:09	
		Total		69	
		Fourth Task			
From			Time		
	1:02:40	1:04:04		0:01:24	
		Total		84	
МІ		7.8.2023 21:00 (CEST		Notes:
		Prep			Visibly stressed. Practiced IT very long time ago.
From			Time		Confusions:
	0:06:20	0:06:25		0:00:05	Did not notice compilation errors.
		Total		5	
		First Task			
From			Time		
	0:06:25	0:12:40		0:06:15	
		Total		375	
		Second Task			
From			Time		
	0:12:42	0:18:03		0:05:21	
		Total		321	
From		Third Task	Timo		
FIUIII		To 0:20:11	Time	0:02:06	
	0.20.00	Total		126	
_		Fourth Task	- :		
From	0:20:14	To 0:21:45	Time	0:01:31	
	∪.∠∪.14	0:21:45 Total		0:01:31 91	
		70141			
MV		0 0 2022 24:00	ic -		Notes
MX		8.8.2023 21:00 J Prep	151		Notes: Very efficient participant, even during scrolling/switching between examples.
From			Time		
	0:10:14	0:10:18		0:00:04	Confusions: none
		Total		4	
		First Tools			
From		First Task To	Time		
	0:10:18	0:11:20		0:01:02	
		Total		62	
		_			
Fro:		Second Task	Ti		
From	0:11:21	To 0:12:15	Time	0:00:54	
	V.11.Z1	Total		54	
				-	
		Third Task			
From			Time	0.00.20	
	0:12:16	0:12:46 Total		0:00:30 30	
		าบเสเ		30	
		Fourth Task			

		То	tal	30
ММ		8.8.2023 17:0 Prep	00 CEST	
From	0:15:48	To 0:22:	Time 38 tal	0:06:50 410
From	0:22:50	First Task To 0:28: To	Time	0:06:07 367
		Second Tas	sk	
From	0:28:59	To 0:32:	Time 20 tal	0:03:21 201
		Third Task	(
From	0:32:23		Time 09 tal	0:02:46 166
		Fourth Tas	k	
From	0:35:11	To 0:40: To	Time 36 tal	0:05:25 325
MM - 2.		8.8.2023 18:0 Prep	00 CEST	
From	0:00:24	To 0:00:	Time 30 tal	0:00:06 6
		First Task		
From	0:00:47	To 0:01:	Time 23 tal	0:00:36 36
		Second Tas	sk	
From 0:0)1:23 [2]	To 0:02: To		0:00:38 38
		Third Task	1	
From	0:02:03	To 0:02: To		0:00:17 17
From		Fourth Tas	Time	
	0:02:22	0:02: To	46 tal	0:00:24 24
SA		9.8.2023 16:0 Prep	00 CEST	
From		То	Time	
	0:06:44 0:08:10	0:08: 0:08:		0:01:17 0:00:05

From

То

0:12:48

Time

0:00:30

30

0:13:18

Total

Notes:

Focused and motivated.

Confusions:

- 1. HW Simulator was not working with preinstalled Java on Ubuntu due to hard to understand "No X11 DISPLAY variable was set" error. I had to step in and offer help in the form of advice to install JRE package and use `update-alternatives --config java` to switch to this newly installed JRE.
- Confusions around file naming.
 Confusing error messages like "too many arguments" (when the file name contained a number) that slowed participant down during the last example.

Notes:

Originally Group B. Wanted to try Group A.

Confusions: none

Notes:

Became increasingly stressed once they started facing confusions mentioned below. Had Java preinstalled compred to others.

Confusions:

1. Confusion over file extensions - Windows Explorer was hiding them. Tried to drag files over. I had

		T	otal	82
		First Tas	k	
From		То	Time	
	0:12:07	0:21	1:20	0:09:13
	0:23:05	0:23		0:00:30
	0:23:47	0:23		0:00:03
	0:24:05 0:24:28	0:24	1:14 1:43	0:00:09 0:00:15
	0:24:20	0:29		0:01:22
	0:29:57	0:30		0:00:29
		T	otal	721
		Second Ta	sk	
From		То	Time	
	0:10:46	0:12	2:05	0:01:19
	0:30:54	0:40):43	0:09:49
		T	otal	668
From		Third Tas	k Time	
1 10111	0:40:50	0:42		0:02:00
	0.40.00		otal	120
		Fourth Ta	sk	
From		То	Time	
	0:42:52	0:45	5:05	0:02:13
		T	otal	133
JO		9.8.2023 17	:00 CEST	
		Prep		
From		То	Time	
	0:10:01	0:12		0:02:43
	0:13:03		3:10	0:00:07
		10	otal	170
		First Tas		
From	0.40.47	To	Time	0.04.00
	0:13:17 0:15:17	0:14	1:53 5:44	0:01:36 0:01:27
	0:16:54	0:10		0:00:27
	0:17:09	0:17		0:00:07
	0:17:49		7:52	0:00:03
	0:18:14	0:19	9:11	0:00:57
	0:19:20	0:19	9:41	0:00:21
	0:21:06	0:22	2:38	0:01:32
	0:22:48		3:34	0:00:46
	0:23:51	0:24		0:00:25
	0:24:31 0:25:08	0:24	1:51 5:54	0:00:20 0:00:46
	0:26:00	0:26		0:00:46
	0:26:59	0:26		0:00:00
	0:27:18	0:28		0:00:43
	0:28:11	0:28	3:36	0:00:25
		To	otal	634
_		Second Ta		
From	0.20.44	To 0:40	Time	0.12.27
	0:29:11		2:38 otal	0:13:27 807
			o tui	001

Total

82

to step in and help. I recommended using a different text editor where it's possible to manage files with control over extensions. Participant then used VSCode.

- 2. Din't understand how to use the provided CLI Text Comparator tool.
- 3. UI required restarting the script for the comparisons to succeed.
- 4. Confusions around the syntax.
- 5. Did not understand meaning of .cmp in relation to .out.

Notes:

Participant that is just about to start Computer Science education. Has only minor experience with programming.

Confusions:

- 1. Did not have Java installed and received an error. Had to get back to the video.
- 2. Did not understand the difference between Load Chip and Load Script. Had to get back to the
- 3. Had a typo in the file that sent him down a wrong path during debugging. I had to step in and help.
- 4. Did not know how to manually evaluate chip. I had to step in and help.

Did not know which line is 12th in Notepad - missing line numbers.

		IIIIIU IASK		
From		То	Time	
	0:42:53	0:48:38		0:05:45
	01.12.00	Total		345
		iotai		345
		Fourth Task		
From		То	Time	
	0:48:40	0:56:03		0:07:23
	0.46.40			
		Total		443
DE		0.0.2022.10:00.0	SECT	
PE		9.8.2023 18:00 (E21	
		Prep		
From		То	Time	
	0:08:11	0:10:20		0:02:09
0.	11:25 [3]	0:11:41		0:00:16
0.				
	0:11:56	0:13:22		0:01:26
	0:14:47	0:15:12		0:00:25
		Total		256
		First Task		
_				
From		То	Time	
	0:17:53	0:21:00		0:03:07
	0:22:00	0:25:26		0:03:26
	0:26:00	0:26:15		0:00:15
	0:27:53	0:28:04		0:00:11
	0:28:06	0:28:21		0:00:15
	0:28:21	0:28:21		0:00:00
	0:29:06	0:32:20		0:03:14
	0:33:37	0:33:46		0:00:09
	0:33:56	0:34:06		0:00:10
0:	36:00 [4]	0:36:21		0:00:21
	0:36:28	0:36:31		0:00:03
		Total		671
		0		
		Second Task		
From		То	Time	
	0:38:53	0:50:30		0:11:37
		Total		697
				•••
		Third Task		
From		То	Time	
	0:50:34	0:56:01		0:05:27
		Total		327
				-
		Fourth Task		
From		То	Time	
	0:56:01	1:00:20		0:04:19
		Total		259
		iotai		233
MS		9.8.2023 19:00 (CEST	
		Prep		
Гис:		-	Tine -	
From		То	Time	
0:	59:10 [5]	0:59:25		0:00:15
	1:00:32	1:00:36		0:00:04

1:00:44

1:00:59

1:01:43

1:04:07

1:04:51

From

1:00:50

1:01:36

1:01:52 **Total**

1:04:32

1:06:39

Time

First Task

To

0:00:06

0:00:37 0:00:09

0:00:25

0:01:48

71

Third Task

Notes:

Took longer than anticipated studying the learning material.

Confusions:

- 1. Confusion around file extension automatically added .txt on Windows. I had to step in and help.
- 2. Did not name files exactly and had problems with the script. I had to step in and help.

Spent a lot of time switching between windows.

Notes:

 $\label{thm:local_problems} \mbox{Had Java preinstalled. Used VSCode but still had some problems with file management.}$

Did not understand how to use TextComparer.

- 2. Confused around Not interface.
- 2. Cornused around Not interface

	1:06:53	1:07:05	0:00:1	
	1:07:07	1:07:07	0:00:0	0
	1:08:02	1:08:47	0:00:4	5
	1:09:28	1:09:44	0:00:1	6
	1:09:59	1:10:05	0:00:0	6
	1:10:05	1:10:44	0:00:3	9
	1:11:29	1:11:34	0:00:0	
	1:16:14	1:16:31	0:00:1	
	1:16:52	1:16:56	0:00:0	
	1:16:57	1:17:15	0:00:1	
	1:17:32	1:17:39	0:00:0	
	1:17:43	1:17:46	0:00:0	
	1:17:53	1:18:23	0:00:3	
	1:18:38	1:18:42	0:00:0	
		Total	33	9
		Second Task		
From		То	Time	
	1:20:10	1:26:58	0:06:4	8
		Total	40	
		Third Task		
From			Time	
				7
	1:27:05	1:28:42	0:01:3	
		Total	9	
		Fourth Task	_	
From			Time	
	1:28:43	1:30:10	0:01:2	
		Total	8	7
MS - 2.		9.8.2023 20:00 C Prep		Notes: Originally Group B. Was done 20 minuets early and wanted to try Group A.
From			Time	Confusions: none
	0:00:14	0:00:30	0:00:1	5
		Total	1	6
		First Task		
From		То	Time	
	0:00:30	0:01:16	0:00:4	6
		Total	4	6
		Second Task		
From			Time	
	0:01:18	0:01:52	0:00:3	4
	5.51.10	Total	0.00.3	
		IOIAI		-
		Third Tools		
		Third Task	Time	
From			Time	
	0:01:54	0:02:23	0:00:2	
		Total	2	9
		Fourth Task		
From			Time	
	0:02:25	0:02:41	0:00:1	6
		Total	1	6
В		10.8.2023 15:00	CEST	Notes:
		Prep		Had Java preinstalled.
From		То	Time	Confusions:
	0:05:59	0:06:21	0:00:2	2 1. Choosing the script file from a directory was confusing - there was only "Load script" and it wouldn't
0:0	06:53 [6]	0:06:58	0:00:0	open the directory most of the time.
	0:07:13	0:07:30	0:00:1	 They got confused on Load chip vs Load script and spent quite some time playing around with that.
				I had to stop in and halp

	0:07:37	0:08:50	0:01:13	r nau to step in and neip. 3. Got confused because the Harware Simulator shows the old HDL even if the new script was
		Total	117	already loaded. I had to step in and help.
		First Task		Spent some time managing windows, but was otherwise precise and efficient when managing files.
From			Гіте	Spent more time solving software problems vs solving the actual assignment - they got all solutions right including syntax on the first try.
	0:11:45	0:12:04	0:00:19	
	0:12:39	0:14:56	0:02:17	
	0:15:32	0:15:59	0:00:27	
	0:16:15 0:19:26	0:16:21 0:20:03	0:00:06 0:00:37	
	0:19:20	0:20:43	0:00:19	
	0:21:27	0:22:59	0:01:32	
	0:23:41	0:24:36	0:00:55	
		Total	392	
		Second Task		
From			Гime	
	0:26:30	0:32:45	0:06:15	
		Total	375	
		Third Task		
From			Гime	
	0:32:57	0:42:50	0:09:53	
		Total	593	
		Fourth Task		
From			Гime	
	0:42:53	0:46:49	0:03:56	
		Total	236	
B - 2.		10.8.2023 15:00 C Prep		Notes: Originall Group B. Wanted to try Group A.
From	0:00:51	To T 0:01:09	Гіте 0:00:18	Confusions: none
	0.00.51	Total	18	Mentioned it was much easier to verify the HDL worked.
		Finat Tools		
From		First Task To T	Гime	
FIOIII	0:01:16	0:03:12	0:01:56	
		Total	116	
		Cocond Tools		
From		Second Task To	Гіте	
1 10111	0:03:13	0:04:01	0:00:48	
		Total	48	
		Third Task		
From			Гіте	
I	0:04:12	0:04:47	0:00:35	
		Total	35	
		Fourth Task		
From			Гime	
	0:04:48	0:05:37	0:00:49	
		Total	49	
R		10.8.2023 18:00 C	CEST	Notes:
		Prep	- -	Brushed quickly through the learning content and the video.
From		-	Гime	
	0:07:54	0:08:08	0:00:14	Confusions: 1. Was unsure about the implementation of Not. Asked for help. I had to explain.
1		Total	14	2. Was expecting autocomplete in HDL code editor.

First Task

	0:10:08	0:10:20		0:00:12	
	0:11:08	0:11:20		0:00:12	
	0:11:51	0:12:27		0:00:36	
	0:13:06	0:13:20		0:00:14	
		Total		100	
		Second Task			
From		То	Time		
	0:14:44	0:18:19		0:03:35	
		Total		215	
		Third Task			
From		То	Time		
	0:18:23	0:19:29		0:01:06	
		Total		66	
		Fourth Task			
From		То	Time		
	0:19:32	0:20:32		0:01:00	
		Total		60	
R - 2.		10.8.2023 18:00	CEST		Notes:
Z.		Prep	0201		Originally Group A. Wanted to try the other group. Did not have Java preinstalled.
From		РГЕР То	Time		onginary order A. Wanted to try the other group. Did not flave dava premistalied.
	0:24:13	0:24:27		0:00:14	Confusions:
					1. Did not understand why the error with java popped up. Asked for help and I told them to watch the
	0:24:50	0:29:03 Total		0:04:13 267	video carefully. 2. Confused around the use of Load Script and when it should load the chip. I had to step in and help.
		iolai		201	3. Did not understand the error - could not see it whole - and there was only mention of "keyword" - nothing specific.
		First Task			
From		То	Time		Repeated the same error that lead to 3.
	0:31:06	0:43:45		0:12:39	Was reluctant to install Java on their system. Was told they can uninstall it at the end.
	0:43:55	0:43:55		0:00:00	
		Total		759	When filling the questionnaire, they mentioned the web version was nicer.
_		Second Task	- :		
From			Time		
	0:44:16	0:46:27		0:02:11	
		Total		131	
		Third Task			
From		То	Time		
		0:48:52		0:02:23	
		Total		143	
		Fourth Task			
From		To	Time		
		0:51:24		0:02:31	
		Total			
L		11.8.2023 20:30	CEST		Notes:
		Prep			Slightly tired.
From		То	Time		Confusions: none
		0:19:42		0:00:05	Cuttusiuts. Hutle
		Total		5	
		First Task			
From		То	Time		
		0:22:05		0:02:21	
		Total		141	
		Second Task			
		January 1 More			

From

To

0:08:15

0:10:08

Time

0:00:26

0:00:12

0:08:41

0:10:20

	0.22.12	Total		154	
F====		Third Task	T:		
From	0:24:49	To 0:26:47 Total	Time	0:01:58 118	
- From		Fourth Task	Timo		
From	0:26:50	To 0:28:21 Total	Time	0:01:31 91	
L - 2.		11.8.2023 20:30	CEST		Notes:
From		Prep To	Time		Slightly tired.
	0:03:35	0:04:30		0:00:55	Confusions: 1. Did not have right Java installed. I had to step in and help because they did not make progress in
	0:04:47	0:05:16		0:00:29	installing Java.
	0:05:16	0:05:16		0:00:00	2. File extensions were incorrect. I had to step in and help.
	0:05:20	0:09:43 Total		0:04:23 347	
		าบเสเ		34 /	
From		First Task To	Time		
	0:10:03	0:17:25	IIIIE	0:07:22	
		Total		442	
		Second Task			
From			Time		
	0:17:29	0:20:06		0:02:37	
		Total		157	
From		Third Task	Timo		
From	0:20:08	To 0:22:20	Time	0:02:12	
	0.20.00	Total		132	
		Fourth Task			
From		То	Time		
	0:22:25	0:25:02		0:02:37	
		Total		157	
МА		13.8.2023 18:45	CEST		Notes:
From		Prep To	Time		Was sometimes distracted by their environment.
	0:01:35	0:01:50		0:00:15	Comes from a completely different background - physics with a part time job in finance.
	0:12:51	0:12:58 Total		0:00:07 22	Confusions: 1. Was not sure what gates to choose - I had to step in and help. Not strictly a problem of the
					software, but it could have suggested available gates.
From		First Task To	Time		
	0:13:01	0:15:00	11110	0:01:59	
		Total		119	
		Second Task			
From			Time		
	0:15:02	0:20:51 Total		0:05:49 349	
From		Third Task To	Time		
	0:20:54	0:21:59	IIIIE	0:01:05	
	0.0 !	3.22.00			

From To Time 0:22:12 0:24:46 0:02:34

0.22.01	Total	74
	iotai	74
	100000000	0507
V	13.8.2023 21:00	CEST
	Prep	
From	То	Time
0:05:39	0:05:51	0:00:12
0:05:54		0:00:07
0:06:15	0:06:25	0:00:10
0:06:25	0:06:38	0:00:13
0:07:26 [7]	0:07:31	0:00:05
0:09:44	0:10:06	0:00:22
0:10:54	0:10:57	0:00:03
0:11:17	0:11:20	0:00:03
0:12:01	0:12:23	0:00:22
	Total	97
	First Task	
From	То	Time
0:13:44	0:13:53	0:00:09
0:15:05	0:17:39	0:02:34
0:18:02	0:18:17	0:00:15
0:18:36	0:18:58	0:00:22
0:21:25	0:21:50	0:00:25
0:21:58	0:22:37	0:00:39
0:22:57	0:23:01	0:00:04
0:23:34	0:23:40	0:00:06
0:24:42	0:24:57	0:00:15
0:25:03	0:26:06	0:01:03
0:26:11	0:27:15	0:01:04
0:27:52	0:28:07	0:00:04
0.21.02	Total	431
	Total	401
	Second Task	
From	To	Time
0:29:33		
0:29:33	0:34:40 0:36:57	0:05:07
0.35.32	0.36.57 Total	0:01:25 307
	IOIAI	307
	Think Tools	
_	Third Task	
From	То	Time
0:37:00	0:39:08	0:02:08
	Total	128
	Fourth Task	
From	То	Time
0:39:11	0:40:49	0:01:38
	Total	98
V - 2.	13.8.2023 21:00	CEST
	Prep	
From	То	Time
0:46:49	0:46:53	0:00:04
0:47:02	0:47:06	0:00:04
		_

Total

0:49:33

Time

First Task

To

0:48:35

From

8

0:00:58

Total

0:23:15

Time

Fourth Task

To

0:22:01

From

65

0:01:14

Notes:

Had Java preinstalled.

Confusions:

- 1. Was confused whether she should run the .sh or .bat file. I had to step in and help.
- 2. Did not know how to confirm manual input pin value. Ran the whole instead of using Eval.
- 3. Did not understand error message when they had a syntax error. I had to step in and help.

No problems with the file management - very precise and fast.

Notes:

Originally Group B. Was willing to try Group A.

Confusions: none

Mentioned it felt easier - did not have to do anything - everything was automated.

		Total		58	
		Second Task			
From	0:49:34	To 0:49:59	Time	0:00:25	
	0.43.54	Total		25	
		Third Task			
From			Time	0.00.20	
	0:50:00	0:50:36 Total		0:00:36 36	
		Fourth Task			
From			Time		
	0:50:39	0:50:51 Total		0:00:12 12	
		Total		12	
к		15.8.2023 18:00	CEST		Notes:
N.		Prep	CEST		Works in IT, but as a part-time data analyst.
From			Time		Rushed through learning material, skipped parts of the video - they did not have sound of the video
	0:09:48	0:09:49 Total		0:00:01 1	available but they did not want it either.
		First Task			Confusions: none
From			Time		Said they found it very easy.
	0:09:49	0:11:10		0:01:21	
		Total		81	
F		Second Task	T:		
From	0:11:12	To 0:13:12	Time	0:02:00	
		Total		120	
		Third Task			
From	0.12.15		Time	0.01.17	
	0:13:15	0:14:32 Total		0:01:17 77	
		Fourth Task			
From			Time		
	0:14:34	0:15:50		0:01:16	
		Total		76	
K - 2.		15.8.2023 18:00	CEST		Notes:
From		Prep To	Time		Originally Group A, willing to try Group B.
0:0	06:47 [8]	0:07:41		0:00:54	Confusions: 1. Did not know how to solve the problem with default .txt file extension. I had to step in and help.
	0:08:07 0:09:45	0:09:08 0:09:54		0:01:01 0:00:09	 Confusion Load Chip vs Load Script. Used both. Result was hidden - they did not see whether all comparisons passed. This was maybe due to
	0.03.40	Total		124	higher pixel density.
		First Task			Noticed the problem with extensions right away. But spent quite some time fighting with Windows to get it right.
From			Time		They modified the test script to use different file names.
	0:10:02	0:10:45		0:00:43	
	0:12:54	0:20:03 Total		0:07:09 43	Said they would leave the course it they would need Java. Code preview was unusable in Hardware Simulator - only extremely simple chips would be usable. Complained about using text files separately.
		Second Task			Praised with Group A they did not have to return to the video.
From	0:20:07	To 0:22:48	Time	0:02:41	Praised Tests with Group A.
	0.20.01	Total		161	COULD NOT COMPLETE - THEY COULD NOT SEE THE ERROR MESSAGE - HIGH DPI SCREEN. Group B application is not scaled to the window size.
		Third Task			

		Total		115
мн		15.8.2023 19:00	CEST	
		Prep	0201	
From		To .	Time	
	0:00:02	0:00:18	0:00):16
	0:02:02	0:02:34	0:00):32
	0:03:09	0:04:33	0:01	L:24
		Total		132
		First Task		
From		То	Time	
	0:08:04	0:08:09	0:00):05
	0:08:26	0:09:14	0:00):48
	0:09:48	0:09:56	0:00):08
	0:10:16	0:10:24	0:00):08
	0:10:32	0:10:41	0:00):09
	0:10:54	0:11:00	0:00):06
	0:12:38	0:13:52	0:01	L:14
	0:14:30	0:15:40	0:01	L:10
	0:16:24	0:16:40	0:00):16
	0:16:45	0:17:07	0:00):22
		Total		266
		Second Task		
From		То	Time	
	0:17:55	0:22:42	0:04	1:47
		Total		287
		Third Task		
From		То	Time	
	0:22:48	0:24:56	0:02	2:08
		Total		128
		Fourth Task		
From		То	Time	
	0:24:59	0:26:54	0:01	L:55
		Total		115
LU		16.8.2023 17:00	CEST	
		Prep		
From		То	Time	
	0:15:36	0:15:39	0:00):03

Total

0:16:23

0:18:59

Total

Total

Time

Time

First Task

Second Task

To

To

0:15:40

0:16:25

From

From

3

0:00:43

0:02:34

154

43

From

From

To

To

0:22:51

0:25:22

Time

Time

0:02:27

0:01:55

147

0:25:18

0:27:17

Fourth Task

Total

Notes:

Had Java preinstalled. Relaxed, slightly in hurry.

- Did not understand syntax error. I had to step in and help.
 Did not understand another syntax error. I had to step in and help again.

Notes:

Does not work in IT, but tried something in JavaScript in the past. Never heard about gates or how computers work - studied grammar school.

Confusions: none.

Had no comments.

		Third	Task			
From		То		Time		
	0:19:02		0:20:59		0:01:57	
	0.13.02					
			Total		117	
		Fourth	ı Task			
From		To		Time		
	0:21:01		0:22:39		0:01:38	
			Total		98	
			10141		00	
LU - 2.		16.8.202	23 17:00	CEST		
		Pro	ер			
From		То		Time		
	0:26:55		0:27:05		0:00:10	
	0:27:19		7:39 [9]		0:00:20	
	0:27:47		0:28:09		0:00:22	
	0:28:41		0:29:00		0:00:19	
	0:29:23		0:30:53		0:01:30	
			Total		161	
		First	Task			
From			Iusk	Timo		
FIOIII		То		Time		
	0:32:40		0:33:12		0:00:32	
	0:33:24		0:33:31		0:00:07	
	0:33:43		0:34:08		0:00:25	
	0:34:43		0:35:26		0:00:43	
	0:35:32		0:35:56		0:00:24	
	0:36:20		0:36:52		0:00:32	
	0:37:21		0:37:33		0:00:12	
	0:37:42		0:37:56		0:00:14	
	0:38:09		0:38:29		0:00:20	
	0:41:18		0:41:43		0:00:25	
	0:42:28		0:42:55		0:00:27	
	0:43:02		0:43:12		0:00:10	
	0:43:33		0:44:12		0:00:39	
	0:44:28		0:45:03		0:00:35	
	0:45:06		0:45:15		0:00:09	
			Total		354	
		Secon	d Task			
From		То		Time		
	0:46:28		0:51:13		0:04:45	
	0.40.20					
			Total		285	
		Third	Task			
From		To		Time		
	0:51:15		0:54:40		0:03:25	
	0.02.20		Total		205	
			iotai		203	
		Fourth	ı Task			
From		To		Time		
	0:54:42		0:56:59		0:02:17	
			Total		137	
		1000				
MK		16.8.202		CEST		
		Pro	ер			
From		То		Time		
1:03	3:09 [10]		1:03:25		0:00:16	
	1		Total		16	
			, otal			
		First	Task			
From		То		Time		

Notes:

Originally Group A. Willing to try Group B.

Confusions:

- Was not sure how to lunch the software .sh/.bat. I had to step in and help.
 Confusion around the extension .hdt not .hdl. Ignored error message did not understand it. I had to step in and help.
 3. Confusion around the use of Run - they skipped Reset and so the script was stuck.

Notes: RPA programmer. Very curious.

Confusions: none.

	1:03:26	1:04:57		0:01:31	
		Total		91	
		Second Task			
From			Time	0.01.00	
	1:05:01	1:06:09 Total		0:01:08 68	
		iotai		00	
		Third Task			
From		То	Time		
	1:06:13	1:07:04		0:00:51	
		Total		51	
		Fourth Task			
From			Time		
	1:07:09	1:08:21		0:01:12	
		Total		72	
MK - 2.		16.8.2023 18:00	CEST		Notes:
wr ∠.		Prep	CESI		Notes: Originally Group A. Wanted to try Group B.
From			Time		
	1:12:43	1:14:28		0:01:45	Confusions: none
	1:15:38	1:17:25		0:01:47	Did not have Java installed. COULD NOT CONTINUE AS THEY DID NOT HAVE ADMINISTRATOR
		Total		105	PRIVILEGES TO INSTALL JAVA.
From		First Task To	Time		
FIOIII		10		0:00:00	
		Total		0	
		Second Task			
From		То	Time		
		Total		0:00:00 0	
		iotai		U	
		Third Task			
From		То	Time		
				0:00:00	
		Total		0	
		Fourth Task			
From			Time		
				0:00:00	
		Total		0	
KA		17.8.2023 11:00	CEST		Notes:
		Prep	5_51		Visibly stressed.
From			Time		Confusions:
	0:13:55	0:14:00		0:00:05	Confusions: 1. Wasn't sure about the name of the input pin on Not.
	0:14:12	0:14:14		0:00:02	
		Total		7	Spent some time returning to the video. Python experience.
		First Task			
From			Time		
	0:14:15	0:18:40		0:04:25	
		Total		265	
		_			
		Second Task	Tires		
From	0:19:52	To 0:24:59	Time	0:05:07	
	J.13.32	0.24.59 Total		307	
		Third Task			

		Total		30
From	0:26:42	Fourth Task To 0:28:16 Total	Time	0:01:34 94
LB		17.8.2023 18:00 Prep	CEST	
From		То	Time	
	0:06:57	0:07:46		0:00:49
	0:08:06	0:08:22		0:00:16
		Total		65
		First Task		
From		То	Time	
	0:10:47	0:12:14		0:01:27
	0:12:40	0:13:45 0:14:25		0:01:05
	0:14:12 0:14:47	0:14:25		0:00:13 0:00:06
	0:14:47	0:14:55		0:01:08
	0:19:27	0:19:50		0:00:23
	0:20:43	0:21:20		0:00:37
	0:21:55	0:22:16		0:00:21
	0:22:27	0:22:53		0:00:26
	0:24:01	0:27:50		0:03:49
	0:28:10	0:28:35		0:00:25
	0:29:17	0:29:38		0:00:21
		Total		621
		Second Task		
From		То	Time	
	0:30:31	0:36:28		0:05:57
	0:37:04	0:39:20 Total		0:02:16 493
F		Third Task	T	
From	0:39:31	To 0:42:34	Time	0:03:03
	0.55.51	Total		183
		Fourth Task		
From	0.40.40	To 0:45:59	Time	0.00.10
	0:42:40	0.45.59 Total		0:03:19 199
		10141		100
LB - 2.	[11]	17.8.2023 18:00	CEST	
From		Prep To	Time	
FIUIII	0:49:09	0:49:27		0:00:18
	0.43.03	Total		18
		Figet To al.		
From		First Task To	Time	
1 10111	0:49:28	0:51:03	11110	0:01:35
		Total		95
-		Second Task	Ti	
From	0.E1.00	To 0.53:35	Time	0.01.20

0:51:06

0:52:35

Total

0:01:29

89

From

То

0:25:01

Time

0:01:38

0:26:39

Total

Notes:

Had Java installed.

Confusions:

- 1. Could not see the error their windows was too small. I had to step in and help.
- 2. Did not understand a confusing syntax error. They started modifying built-in gates. I had to step in 3. Confused Load Script vs Load Chip.4. Syntax error - did not inderstand it for a while and started going down the wrong path. I had to step
- in and help.

Notes:

Originally Group B. Willing to try Group A.

Confusions: none.

Manually tested inputs & outputs - they did not do this with Group B software. Mentioned it was much easier than in Java software.

Praised automated running of tests.

From		Third Task		
		To	Time	
	0:52:37	0:54:05	0:01:2	8
		Total		8
		Fourth Task		
From		То	Time	
	0:54:08	0:55:29	0:01:2	
		Total	8	1
мт		20.8.2023 21:00	CEST	Notes:
		Prep		Had Java preinstalled.
=rom		То	Time	
	0:03:37	0:03:43	0:00:0	6 Confusions: none
	0:03:58	0:04:13	0:00:1	5 Very efficient and attentive. Made basically zero mistakes.
	0:04:20	0:04:31	0:00:1	
	0:04:47	0:05:04	0:00:1	7
		Total	4	9
=rom		First Task To	Time	
10111	0:06:53	0:08:20	0:01:2	7
	0:09:08	0:08.20	0:01.2	
	0:09:32	0:09:49	0:00:1	
	0:10:16	0:10:19	0:00:0	
	0:10:10	0:10:19	0:00:0	
	0:11:00	0:11:35	0:00:3	
	0:11:49	0:11:52	0:00:0	
	0:12:04	0:12:14	0:00:1	
	0:12:32	0:13:02	0:00:3	
	0:13:07	0:13:24	0:00:1	
	0:13:52	0:14:08	0:00:1	
		Total	23	9
		Cocond Tools		
From		Second Task To	Time	
	0:15:24			9
	0.120.2	Total		
		Third Task		
From	0.40.5=	To	Time	2
	0:19:07			
		Total	14	U
		Fourth Task		
=rom		To	Time	
	0:21:33			9
		Total	15	9
		20.8.2023 21:00	CEST	Notes:
MT - 2			CLUI	Notes: Had Java preinstalled.
MT - 2.		Pren		
		Prep To	Time	
=rom		То	Time 0:00:0	Confusions: none
-rom	0:26:30	To 0:26:34	0:00:0	4
=rom		To 0:26:34	0:00:0 0:00:1	4
-rom	0:26:30	To 0:26:34 0:27:08	0:00:0 0:00:1	4 6
From	0:26:30	To 0:26:34 0:27:08 Total	0:00:0 0:00:1	4 6
=rom =rom	0:26:30 0:26:52	To 0:26:34 0:27:08 Total First Task	0:00:0 0:00:1 2	4 6 0
From	0:26:30	To 0:26:34 0:27:08 Total First Task	0:00:0 0:00:1 2 Time 0:00:5	4 6 0

Second Task

		iotai		42
From	0:28:52	Third Task To 0:29:29 Total		0:00:37 37
From	0:29:31	Fourth Task To 0:30:00 Total		0:00:29 29
E		20.8.2023 22:00 Prep	CEST	
From	0:05:10	То		0:00:04 4
From	0:05:14	First Task To 0:06:15 Total		0:01:01 61
From	0:06:16			0:01:03 63
From	0:07:20	Third Task To 0:07:53 Total		0:00:33 33
From	0:07:55	Fourth Task To 0:08:31 Total	Time	0:00:36 36
E - 2.	20.8.2023 22:00 CEST			

From

To

0:28:07

Time

0:28:49 **Total** 0:00:42

42

Notes:

Native English speaker.

Confusions: none

Notes:

Originally Group A. Willing to try Group B.

- [2] Started by copying code from the previous one that is why the timestamp is the same.
- [3] I could not see the screen for about 20 seconds. It is possible it was spent with setup.

[1] Timestamp from the video. All timestamps before were from the call, hence the shift.

- [4] The video was briefly interrupted here. It could be earlier.
- [5] The time to download the bundle is approximate as I could not see the initial timestamp I had the previous participant still on a call in parallel.
- That is also why these timestamps start at one hour they were in the same recording.
- [6] The participant was unpacking on another screen, so I may have missed something.
- [7] Unzipped away from the shared portion of the screen.
- [8] I have recorded a separate video.
- [9] I could not see the other screen I warned the participant. This timestamp is likely not precise.
- [10] I did not turn off the recording from the previous session, as they were back-to-back. I just replaced the meeting windows.
- [11] Extra data I forgot I do not have to collect I already had enough participants for this group.