

Interactive asynchronous activities via e-learning

By Rohayanti Hassan

Asynchronous Online Teaching

Outline



ASYNCHRONOUS
ONLINE TEACHING



THE NEEDS

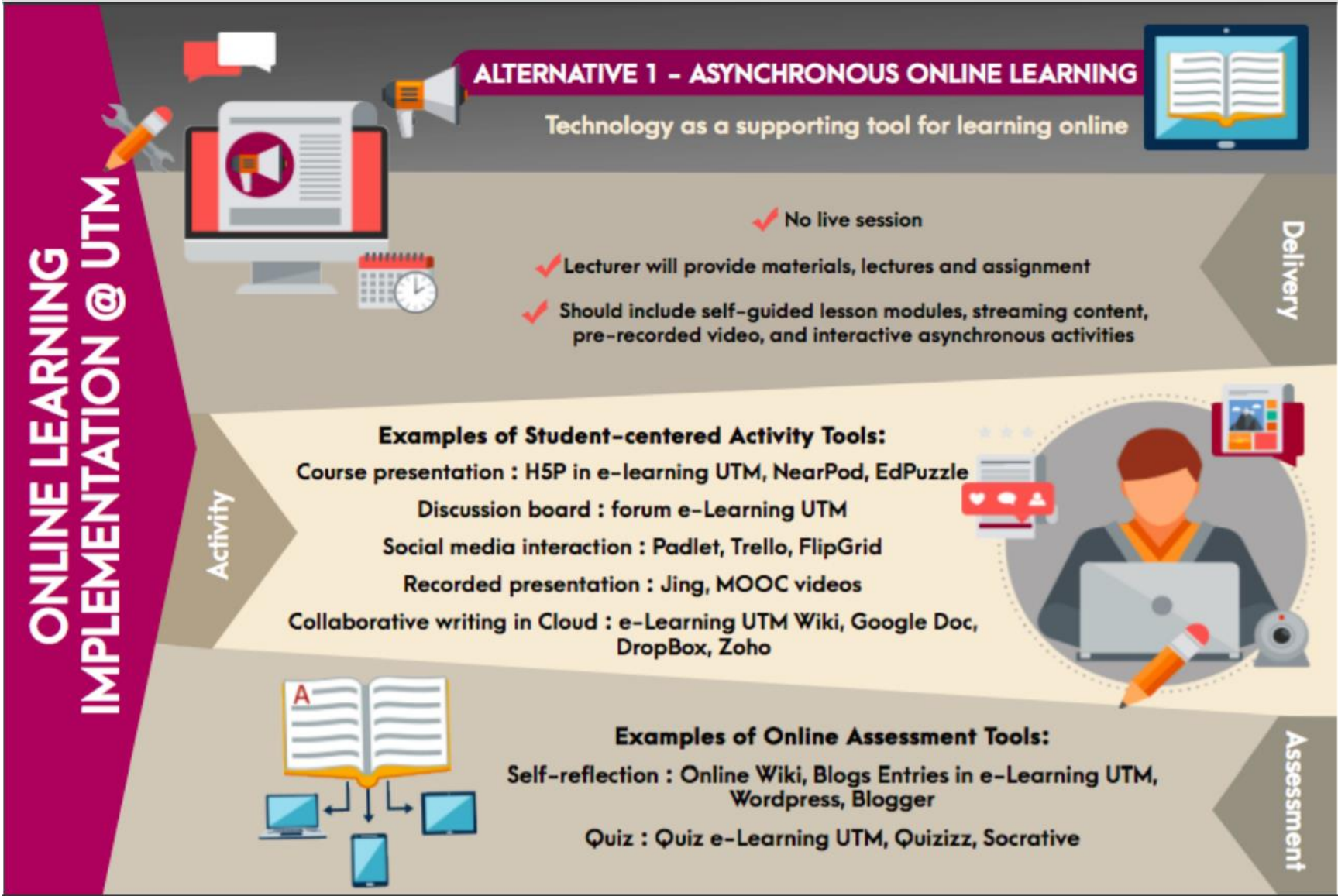


ENCOURAGE STUDENT
ENGAGEMENT



EXAMPLE OF LECTURE
MATERIALS
ORGANIZATION

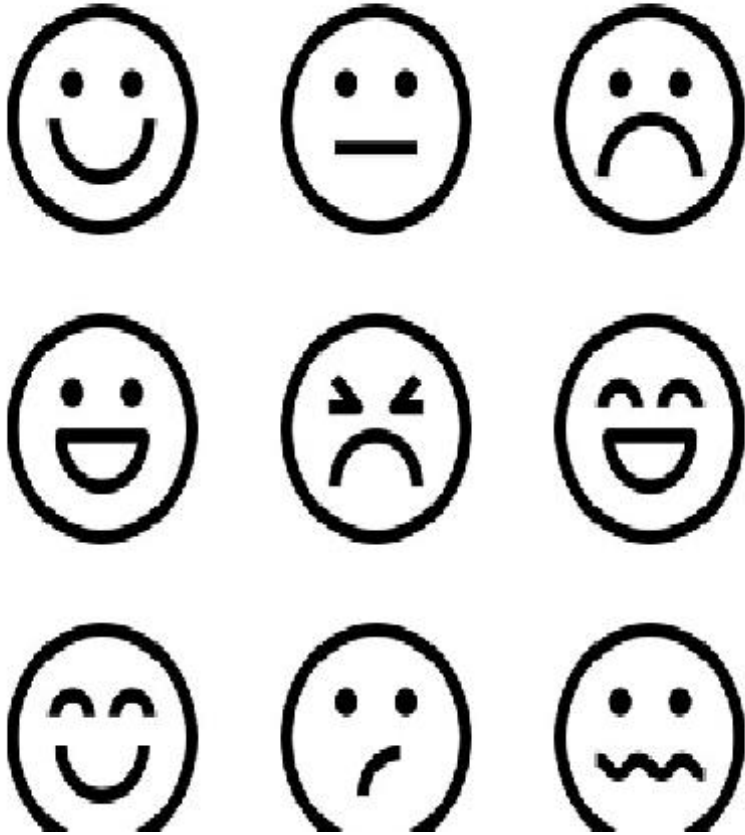
Asynchronous Online Teaching



Why we opt for Async Online Teaching?

Some students struggling with internet data limitation

- ✓ I am using Mobile Hotspot from UMobile which is limited to 3 GB only The broadband connection of my apartment got problem and the repairman give excuse to the lock-down. As a result my situation regarding online video lessons are not suitable.
- ✓ Some students like me have some limitations in accessing the internet unfortunately..
- ✓ I hope the classes are not live, where we can access a set of lectures by our respective lecturers to watch at our own pace if possible. This is convenient for me to solve to internet struggle in case the internet connection is too slow, or the internet package finishes amidst a lecture. I do not have a wifi connection and the internet I use is only from my cellphone's hotspot. So, I am afraid my internet package would finish too soon in the middle of the live lecture.
- ✓ My internet is quite slow recently. I am not sure it can handle video conference and web browsing at the same time.
- ✓ Just scared that my mobile data won't be enough since im at my hometown and i use my data 100% of the time for assignments, labs, projects, fyp, entertainment purposes because, communication, everything.
- ✓ Sometimes the internet speed is slow, so if the student open the cam from his/her side, then it will decrease the quality of the call and the lecturer will not be heard clearly.



And like you,

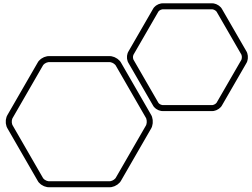
ROHA

struggles with
Online Students Teaching



The Challenge...

How to maximize student engagement
when we opt for Async Online Teaching?



Encourage student engagement

1. Reminder & quotes	Ready for tomorrow class ya... will start at 10am until 1pm It would be 100% advantage if you manage to perform the task/activity before the class session. ☀ morning uols ☀ .. keep praying that uols stay alive stay healthy and go away covid 19
2. Share unit lesson plan before class	To alert students & ask their commitment.
3. Clear activity instruction with question	For each activity (read material, watch video, listen audio) must attach with question
4. Feedback	Must respond on student's activity, close the discussion. May compile questions from student and make FAQ.
5. Monitor student activity	Track activity completion, track student activity log
6. Informal quiz	Test the knowledge

1. Reminder & quotes

Share your words



2. Share unit lesson plan

Topic #7: Test Design

Time	Activity	Via	Duration
10.00	✓ Greetings by lecturer ✓ Briefing on topic and unit learning plan	WhatsApp	10 min
10.10	✓ Student scan attendance qr code	WhatsApp	5 min
10.15	✓ Student perform activity, refer Forum discussion: A. Familiar with Software Testing Terminology ✓ Lecturer intermittently feedback via forum & WhatsApp	E-learning WhatsApp	20 min
10.35	✓ Lecturer summarize activity A	WhatsApp	5 min
10.40	✓ Student perform activity, refer Forum discussion: B. Derive Test Condition ✓ Lecturer intermittently feedback via forum & WhatsApp	E-learning WhatsApp	15 min
10.55	✓ Lecturer summarize activity B	WhatsApp	5 min
11.00	✓ Student perform activity, refer Forum discussion: C. Create Test Case ✓ Lecturer intermittently feedback via forum & WhatsApp	E-learning WhatsApp	15 min
11.15	✓ Lecturer summarize activity C	WhatsApp	5 min

2. Share unit lesson plan (part 2)

Time	Activity	Via	Duration
11.20	<ul style="list-style-type: none"> ✓ Student perform activity, refer Forum discussion: D. Know the test design development process ✓ Lecturer intermittently feedback via forum & WhatsApp 	E-learning WhatsApp	20 min
11.40	<ul style="list-style-type: none"> ✓ Lecturer summarize activity D 	WhatsApp	5 min
11.45	<ul style="list-style-type: none"> ✓ Student perform activity, refer Forum discussion: E. Category of Test Design Technique ✓ Lecturer intermittently feedback via forum & WhatsApp 	E-learning WhatsApp	20 min
12.05	<ul style="list-style-type: none"> ✓ Lecturer summarize activity E 	WhatsApp	5 min
12.10	<ul style="list-style-type: none"> ✓ Student perform activity, refer Forum discussion: F. Equivalence Partition and Boundary Value Analysis ✓ Lecturer intermittently feedback via forum & WhatsApp 	E-learning WhatsApp	20 min
12.30	<ul style="list-style-type: none"> ✓ Lecturer summarize activity F 	WhatsApp	5 min
12.35	<ul style="list-style-type: none"> ✓ Lecturer open live question & answer via vid conference (optional to join) ✓ Closing session via WhatsApp 	Webex WhatsApp	20 min
Total			175 min

3. Clear activity instruction with question

- For 2-3 hours normal F2F lecture, how many slides do u have? 30, 50, 100?
- For async teaching, its recommended to chunk the slides into sub-topics.
- For each sub-topics, express your creativity and artistic skill in preparing lecture material via:
 - Recorded video slide
 - Recorded audio slide
 - Attach plain slide with separated audio
 - Supplement with YouTube video
- The most important part, bind this lecture materials with clear instruction and questions.
- **FORUM** in e-learning is so helpful

4. Feedback

By Lee Shulman (1999)



Amnesia

The students forget the material or even forget learning it



Fantasia

The students misunderstood, misconception



Inertia

The students are unable to synthesize or apply the facts they have learned



Re: A. Familiar with Software Testing Terminology
by LOH ZHEUNG YIK A17CS0080 - Monday, 6 April 2020, 8:36 PM

LOH ZHEUNG YIK A17CS0080

I watched the video about writing test case.

But my question is, let say I have a form that have many input fields such as a registration form, do I need to do test case for all fields like:

1. check the response for entering valid first name
2. check the response for entering invalid first name
3. check the response for entering valid last name
4. check the response for entering invalid last name
5. check the response for entering valid matric id
6. check the response for entering invalid matric id

and so on...

Compile and make FAQ.



Re: A. Familiar with Software Testing Terminology
by MUHAMMAD HAZIQ BIN AMIR A17CS0117 - Tuesday, 7 April 2020, 8:39 AM

How about Linear Scripting Framework and Behavior Driven Development Testing Framework? Are they also included in the software automation testing?

Perm



Re: A. Familiar with Software Testing Terminology
by NUR NADIRA EZRIN BINTI HAIRUDIN B18CS0021 - Monday, 6 April 2020, 11:36 PM

My first question is regarding Boundary Value Analysis & Equivalence Partitioning.

1. When is the best and most suitable situation to apply these 2 techniques? Or are they allowed to choose freely?

Second question is regarding Automation Testing.

2. Why test cases that have frequently changing requirements is not suitable for automation testing?

5. Monitor student activity

- Edit settings
- Turn editing on
- Course completion
- Filters
- Gradebook setup
- Backup
- Restore
- Import
- Reset
- Recycle bin
- More...

1. Select More...

Reports

- Competency breakdown
- Logs
- Live logs
- Activity report
- Course participation
- Activity completion

2. Select Report Type...

3. Example Report Type...

Time	User full name	Affected user	Event context	Component	Event name	Description	Origin	IP address
7 April 2020, 10:48 AM	AHMAD NAZRI BIN ABDULLAH A17CS0004	-	Forum: Topic #6 Lecture Slide & Activity	Forum	Discussion viewed	The user with id '4774' has viewed the discussion with id '15194' in the forum with course module id '66321'.	web	175.141.80.104
7 April 2020, 10:48 AM	AHMAD NAZRI BIN ABDULLAH A17CS0004	-	Forum: Topic #6 Lecture Slide & Activity	Forum	Course module viewed	The user with id '4774' viewed the 'forum' activity with course module id '66321'.	web	175.141.80.104
7 April 2020, 10:42 AM	AHMAD NAZRI BIN ABDULLAH A17CS0004	-	Forum: Topic #6 Lecture Slide & Activity	Forum	Discussion viewed	The user with id '4774' has viewed the discussion with id '15188' in the forum with course module id '66321'.	web	175.141.80.104
7 April 2020, 10:42 AM	AHMAD NAZRI BIN ABDULLAH A17CS0004	-	Forum: Topic #6 Lecture Slide & Activity	Forum	Discussion viewed	The user with id '4774' has viewed the discussion with id '15188' in the forum with course module id '66321'.	web	175.141.80.104
7 April 2020, 10:36 AM	AHMAD NAZRI BIN ABDULLAH A17CS0004	-	Forum: Topic #6 Lecture Slide & Activity	Forum	Discussion viewed	The user with id '4774' has viewed the discussion with id '15188' in the forum with course module id '66321'.	web	175.141.80.104
7 April 2020, 10:36 AM	AHMAD NAZRI BIN ABDULLAH A17CS0004	-	Forum: Topic #6 Lecture Slide & Activity	Forum	Course module viewed	The user with id '4774' viewed the 'forum' activity with course module id '66321'.	web	175.141.80.104

4. Another example Report Type...

TOPIC 6. STATIC TESTING

Static Testing Part 1	145 views by 50 users	-	Tuesday, 7 April 2020, 2:56 PM (2 hours 32 mins)
Static Testing Part 2	87 views by 49 users	-	Tuesday, 7 April 2020, 11:27 AM (6 hours 1 min)
Static Testing Part 3	73 views by 49 users	-	Tuesday, 7 April 2020, 11:28 AM (6 hours)
Static Testing Part 4	185 views by 49 users	-	Tuesday, 7 April 2020, 11:41 AM (5 hours 47 mins)
Lecture Slide on Static Testing	85 views by 40 users	-	Tuesday, 7 April 2020, 10:52 AM (6 hours 36 mins)

TOPIC 7. TEST DESIGN

Topic #6 Lecture Slide & Activity	1705 views by 51 users	-	Tuesday, 7 April 2020, 1:46 PM (3 hours 42 mins)
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Very meaningful information can be extracted from this test.
Analyse the % of achievement.
Do reflection. Do CQI.

We may improve:

1. Repeat lecture on topic-questions of low achievement
2. May ask the low performer (student)

5. Which of the following statements about the benefits of deriving test cases from use cases are true and which are false? I. Deriving test cases from use cases is helpful for system and acceptance testing. II. Deriving test cases from use cases is helpful only for automated testing. III. Deriving test cases from use cases is helpful for component testing. IV. Deriving test cases from use cases is helpful for integration testing.

a	I and IV are true; II and III are false	3 players	15 %	<div style="width: 15%; height: 10px; background-color: #28a745;"></div>
b	I is true; II, III, and IV are false	3 players	15 %	<div style="width: 15%; height: 10px; background-color: #dc3545;"></div>
c	II and IV are true; I and III are false	4 players	20 %	<div style="width: 20%; height: 10px; background-color: #dc3545;"></div>
d	I, III and IV are true; II is false	8 players	40 %	<div style="width: 40%; height: 10px; background-color: #dc3545;"></div>
	Unattempted	2 players	10 %	<div style="width: 10%; height: 10px; background-color: #6c757d;"></div>

ASSIGNED

Test Your Knowledge [Edit](#)

April 7th 2020, 6:56 AM (9 hours ago)

[View quiz](#) [Flashcards](#) **NEW**

Accuracy: 38% | Questions: 6 | Player Attempts: 20

Players | Questions | Overview | Standards | [Print](#) | [Download](#)

Sort By: Score | [Email all parents](#)

	rubayat hyder (rubayat ...)	<div style="width: 67%; height: 10px; background-color: #28a745;"></div> 4	<div style="width: 33%; height: 10px; background-color: #dc3545;"></div> 2	67% Accuracy	3630 Score	Email to Parent
	Muhammad Hafiz Bin B...	<div style="width: 67%; height: 10px; background-color: #28a745;"></div> 4	<div style="width: 33%; height: 10px; background-color: #dc3545;"></div> 2	67% Accuracy	2960 Score	Email to Parent
	Mimi Farhana (Mimi Fa...	<div style="width: 67%; height: 10px; background-color: #28a745;"></div> 4	<div style="width: 33%; height: 10px; background-color: #dc3545;"></div> 2	67% Accuracy	2880 Score	Email to Parent
	Hakim Hambali (Hakim ...)	<div style="width: 67%; height: 10px; background-color: #28a745;"></div> 4	<div style="width: 33%; height: 10px; background-color: #dc3545;"></div> 2	67% Accuracy	2850 Score	Email to Parent

	Qudus alKhred (Qudd...	<div style="width: 33%; height: 10px; background-color: #28a745;"></div> 2	<div style="width: 67%; height: 10px; background-color: #dc3545;"></div> 4	33% Accuracy	1380 Score
	Muhammad Farhan Idri...	<div style="width: 33%; height: 10px; background-color: #28a745;"></div> 2	<div style="width: 67%; height: 10px; background-color: #dc3545;"></div> 4	33% Accuracy	1330 Score
	Aina Rahman (Aina)	<div style="width: 33%; height: 10px; background-color: #28a745;"></div> 2	<div style="width: 67%; height: 10px; background-color: #dc3545;"></div> 4	33% Accuracy	1240 Score
	MD RAQIBUL ISLAM (M...	<div style="width: 17%; height: 10px; background-color: #28a745;"></div> 1	<div style="width: 83%; height: 10px; background-color: #dc3545;"></div> 5	17% Accuracy	940 Score
	MOHAMMAD FAHAD (M...	<div style="width: 17%; height: 10px; background-color: #28a745;"></div> 1	<div style="width: 83%; height: 10px; background-color: #dc3545;"></div> 5	17% Accuracy	830 Score
	Nadira Ezrin (Nadira Ez...	<div style="width: 17%; height: 10px; background-color: #28a745;"></div> 1	<div style="width: 83%; height: 10px; background-color: #dc3545;"></div> 5	17% Accuracy	600 Score
	Kevin Thien (Kevin Thien)	<div style="width: 0%; height: 10px; background-color: #6c757d;"></div> 6	<div style="width: 0%; height: 10px; background-color: #dc3545;"></div> 0	0% Accuracy	0 Score
	Danish Rasali (Danish R...	<div style="width: 0%; height: 10px; background-color: #6c757d;"></div> 6	<div style="width: 0%; height: 10px; background-color: #dc3545;"></div> 0	0% Accuracy	0 Score
	Mohammad Naim Faiz...	<div style="width: 0%; height: 10px; background-color: #6c757d;"></div> 6	<div style="width: 0%; height: 10px; background-color: #dc3545;"></div> 0	0% Accuracy	0 Score

6. Informal quiz



EXAMPLE OF LECTURE
MATERIALS
ORGANIZATION

Topic outline – Example 1

TOPIC 6. STATIC TESTING

- Static Testing
- Reviews
- Static Analysis

1. No online face to face / No video conferencing
2. However, students must complete watching video [Static Testing Part 1](#)
3. Complete watching video [Static Testing Part 2](#)
4. Complete watching video [Static Testing Part 3](#)
5. Complete watching video [Static Testing Part 4 and answering questions](#)
6. Students are allowed to watch at your place at your own suitable time within today
7. Only when students completing watch four videos, attendance for today will be counted.
8. Lecture slides can be retrieved in the folder below
9. Always stay safe

-  [Static Testing Part 1](#)
-  [Static Testing Part 2](#)
-  [Static Testing Part 3](#)
-  [Static Testing Part 4](#)
-  [Lecture Slide on Static Testing](#)


- ✓ Instruction is given
- ✓ Recorded audio lecture material is given
- ✓ Questions in recorded video is provided


- Testing terminology and definition
- Test condition
- Test case
- The Test Development Process
- Category of test design
- Equivalence partition and boundary value analysis

Start from today onward, your attendance will be counted based on activity completion in e-learning.

Access them and perform accordingly ya. Together, we enjoy the new learning.

Read the lecture materials, perform and complete all tasks below.

  Topic #6 Lecture Slide & Activity 

 Ask participants to open
joinmyquiz.com
and enter this code
5 6 1 0 8 4

 Go to www.menti.com and use the code **65 27 98**



1

Grab your phone

www.menti.com

2

Go to www.menti.com



3

Enter the code 65 27 98 and vote!

Topic outline – Example 2

- ✓ Instruction is given
- ✓ Plain lecture slide with separated audio is given in forum
- ✓ Questions is provided in forum
- ✓ Quiz is given













Forum outline - Example

As per outline in the Unit Lesson Plan

Topic #6 Lecture Slide & Activity



Add a new discussion topic

Discussion	Started by	Replies	Last post
F. Equivalence Partition and Boundary Value Analysis	 ROHAYANTI BINTI HASSAN 9920	30	DHIYA' AHADAN BIN ABDULLAH A17CS0040 Tue, 7 Apr 2020, 1:46 PM 
E. Category of Test Design Technique	 ROHAYANTI BINTI HASSAN 9920	31	DHIYA' AHADAN BIN ABDULLAH A17CS0040 Tue, 7 Apr 2020, 1:42 PM 
B. Derive Test Condition	 ROHAYANTI BINTI HASSAN 9920	44	DHIYA' AHADAN BIN ABDULLAH A17CS0040 Tue, 7 Apr 2020, 1:40 PM 
D. Know the test design development process	 ROHAYANTI BINTI HASSAN 9920	28	DHIYA' AHADAN BIN ABDULLAH A17CS0040 Tue, 7 Apr 2020, 1:40 PM 
A. Familiar with Software Testing Terminology	 ROHAYANTI BINTI HASSAN 9920	21	MUHAMMAD HAFIZ BIN BAHARUDIN A17CS0113 Tue, 7 Apr 2020, 12:47 PM 
C. Create Test Case	 ROHAYANTI BINTI HASSAN 9920	38	MUHAMMAD HILMAN BIN ABDUL JALIL A17CS0119 Tue, 7 Apr 2020, 11:47 AM 

A. Familiar with Software Testing Terminology

by ROHAYANTI BINTI HASSAN 9920 - Tuesday, 31 March 2020, 12:25 AM

Understand the following terminology & watch the video.

Post any unclear things here for me to clarify. Each of you

Dynamic testing

Testing that involves the execution of the software of the component or system.

Test basis

All documents from which the requirements of a component or system or
The documentation on which the test cases are based.

Test condition

An item or event e.g. a function, transaction, feature, quality attribute,
element of a component or system that could be verified by one or more
cases,

Test design specification

A document specifying the test conditions (coverage items) for a test item, the
test approach and identifying the associated high level test cases [after IEEE 829]

Test case

Contains the following information:

- for the execution necessary **preconditions**,
- a set of **input values** (one input value per parameter of the test object),
- the amount of **expected results**, as well as
- the **expected postconditions**.

Test cases are developed for a particular objective or test condition, such as to
exercise a particular program path or to verify compliance with a specific
requirement [after IEEE 610].

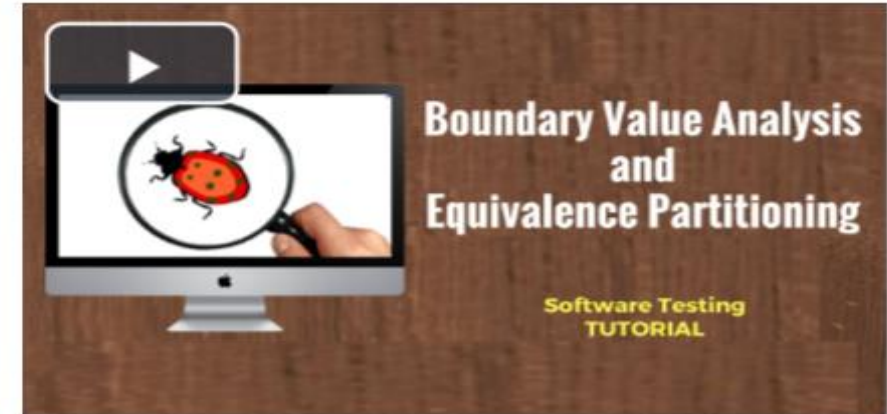
Precondition

Environmental and state conditions that must be fulfilled before the test object can be
executed with a particular test or test procedure

Video #3:



Video #4:



Forum style #1 A. Familiar with Software Testing Terminology (20 min)

Video #5: [Automation Testing](#)

- ✓ Instruction is given
- ✓ Plain lecture slide is given
- ✓ Supplement with YouTube video
- ✓ Highlight core figure/part from the slide
- ✓ Question is provided

Forum style #2

B. Derive Test Condition (15 min)

◀ F. Equivalence Partition and Boundary Value Analysis

Display replies in nested form

Move this discussion to ...

Move

Pin



B. Derive Test Condition

by ROHAYANTI BINTI HASSAN 9920 - Sunday, 5 April 2020, 9:43 PM

In 10 minutes, read the slide below and understand on how to derive test condition.

Listen to [audio note](#).

In another 10 minutes, derive four (4) more test condition from the similar requirements as follows:

1. ATM must do withdrawals
2. Withdrawals are between RM10-RM300
3. Withdrawals are in RM10 multiple

 [04 Test Condition.pdf](#)

- ✓ Instruction is given
- ✓ Plain lecture slide is given
- ✓ Audio note is given
- ✓ Question is provided

Forum style #3

C. Create Test Case (15 min)


by [ROHAYANTI BINTI HASSAN 9920](#) - Sunday, 5 April 2020, 9:53 PM

In 5 minutes, read the slide below and try to understand what is test case. Listen to [audio note](#).

Next, watch the following video on how to create the test case.

[Video TC](#)

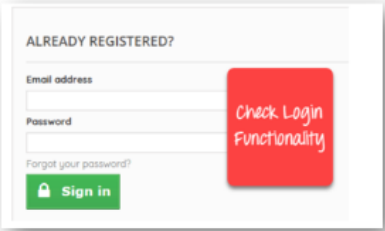
In another 5 minutes, try to answer this exercise.



Exercise

Try to create a test case for the following scenario:

Check Login Functionality



ALREADY REGISTERED?

Email address

Password

Forgot your password?

Sign in

In a format:

(a)

TC ID	Description	Test Data	Expected result	Actual result	Pass/Fail?
-------	-------------	-----------	-----------------	---------------	------------

(b)

TC ID	Description	Test steps	Test Data	Expected result	Actual result	Pass/Fail?
-------	-------------	------------	-----------	-----------------	---------------	------------

 [05 Test Case.pdf](#)

- ✓ Instruction is given
- ✓ Plain lecture slide is given
- ✓ Audio note is given
- ✓ Supplement with YouTube video
- ✓ Highlight core figure/part from the slide
- ✓ Question is provided

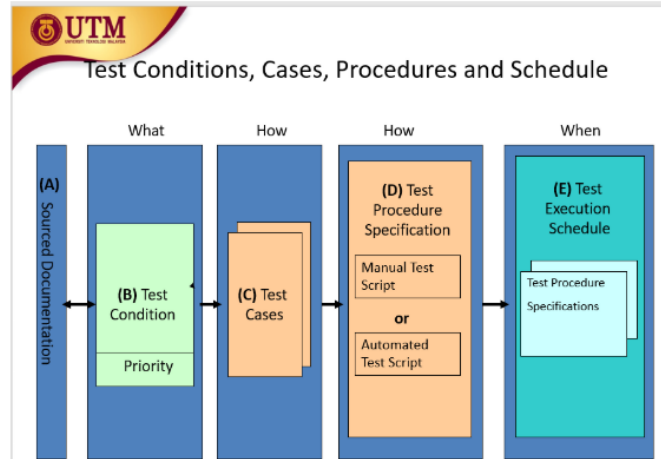
Forum style #4

D. Know the test design development process (20 min)

by ROHAYANTI BINTI HASSAN 9920 - Sunday, 5 April 2020, 9:58 PM

In 10 minutes, read the slide below to understand four main processes in test design development.

The diagram below shows the process of test design development. Yet, in the previous forum you have learnt on some terminologies that being used in this diagram. Next, you are required to find more videos that can elaborate more on the following process A, B, C, D & E as depicted in the diagram.



Listen to [audio](#)

Eg:

A - Video url: ?

B - Video url" ?

02 Test Development Process.pdf

- ✓ Instruction is given
- ✓ Plain lecture slide is given
- ✓ Audio note is given
- ✓ Highlight core figure/part from the slide
- ✓ Question is provided

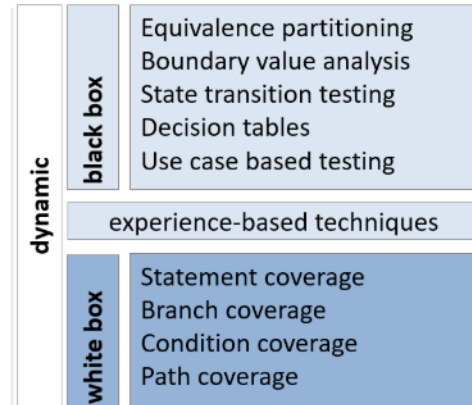
Forum style #5

E. Category of Test Design Technique (20 min)

E. Category of Test Design Technique
by ROHAYANTI BINTI HASSAN 9920 - Sunday, 5 April 2020, 10:06 PM

In 12 minutes, read the slide below, try to understand and differentiate the category of test design techniques.

Next, based on the following diagram, try to find a relevant website that able to explain the available techniques.



Listen to [audio note](#)

- A. Dynamic testing - url = ?
- B. Black box testing - url = ?
- C. White box testing - url = ?
- D. Equivalence partition - url = ?
- E. Boundary Value Analysis - url = ?
- F. Experience-based - url = ?
- G. Use-case based testing - url = ?
- H. State transition testing - url = ?
- .. more

03 Category Test Design.pdf

- ✓ Instruction is given
- ✓ Plain lecture slide is given
- ✓ Audio note is given
- ✓ Highlight core figure/part from the slide
- ✓ Question is provided

Forum style #6

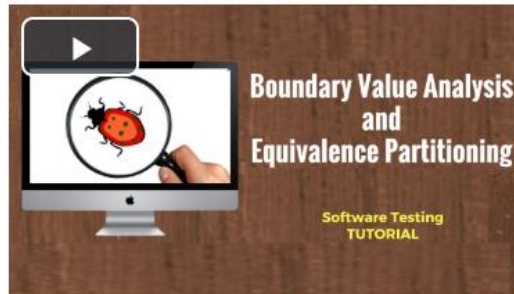
F. Equivalence Partition and Boundary Value Analysis (20 min)



F. Equivalence Partition and Boundary Value Analysis

by ROHAYANTI BINTI HASSAN 9920 - Sunday, 5 April 2020, 10:33 PM

Read material below and watch this video and try to understand both techniques.



Next, try to solve the following problem. Do you think how many partitions should be generated to test? Derive the boundary value data for each partitions.

- Let's consider the behavior of Order Pizza Text Box Below
- Pizza values 1 to 10 is considered valid. A success message is shown.
- While value 11 to 99 are considered invalid for order and an error message will appear, "Only 10 Pizza can be ordered"

Order Pizza:

Here is the test condition

1. Any Number greater than 10 entered in the Order Pizza field (let say 11) is considered invalid.
2. Any Number less than 1 that is 0 or below, then it is considered invalid.
3. Numbers 1 to 10 are considered valid
4. Any 3 Digit Number say -100 is invalid.

 06 Equivalence Partition BVA.pdf

- ✓ Instruction is given
- ✓ Plain lecture slide is given
- ✓ Supplement with YouTube video
- ✓ Highlight core figure/part from the slide
- ✓ Question is provided

Survey from students

**Does lecture materials enough for you to learn?
What can be improved?**

It was enough and nothing has to be improved

Yes, everything seems great

Provide more examples within the slides

Yeah its very enough and sufficient

The materials are very clear and understandable.

Preparedness for those who do not access the internet if there is that person. For materials it's ok and the lesson is good...

I think that the lecture materials is more than enough but i think that using zoom is better.

Yes, although it will depend the topics with the media to learn.

Next week class maybe we should do video conference like zoom so that dr do not need to voicenote in order to give lecture . The lecture will be on live and we will ask questions about the lecture topic.

Survey from students



Does lecture materials enough for you to learn? What can be improved?

It was enough for me
Alhamdulillah

Good materials but I hope we can take any project and do a step by step test on that particular project to understand thoroughly the procedures of testing

So far it's enough. Maybe it can be improved by providing a lot of examples for every topic like you did today 😊

yes it is enough, i enjoy the forum session as we can study beforehand.

Yes, all the explanation is crystal clear.

Assalamu Alaikum Miss. Yes it is useful enough to clear your lecture material concept.

Yes

Enough for me. My suggestion is to use powerpoint slide that can include audio for each slide

yes because it has more activity that students can learn and think. and I hope it will be making a video conference and give more exercise

Survey from students



Does lecture materials enough for you to learn?

What can be improved?

For me, it is enough for the lecture

I think that is good enough.
Thank you dr.

the material is enough and very good indeed, it's just that I think I prefer to use video conferencing as it is more interactive, communicative and realtime compared to WhatsApp.

It is enough for the class but the time we need to learn something is not enough for all us. the learning process is rushed

Instead of audio notes, maybe use videos instead where you record your screen and explain the notes because it is quite confusing when referring to the lecture notes and hearing to your audio note