BOOTCAMP KRISA SIRI 3/2021:

PENGUJIAN SISTEM

28 – 30 JUN 2021 (ISNIN-RABU)

KRISA
PANDUAN KEJURUTERAAN
SISTEM APLIKASI SEKTOR AWAM

PENGUJIAN SISTEM: SPESIFIKASI KES UJIAN (KRISA)

TAKLIMAT

06

GLOSSARY

Test Case

Set of **test case preconditions**, inputs (including actions, where applicable), and expected results, developed **to drive the execution of a test item to meet test objectives**, including correct implementation, error identification, checking quality, and other valued information

Test Coverage Item

Attribute or combination of attributes that is derived from one or more test conditions by using a test design technique that enables the measurement of the thoroughness of the test execution.

Test Coverage

Degree, **expressed as a percentage**, to which specified test coverage items have been exercised by a test case or test cases

Test Case Specification

Documentation of **a set of one or more test cases**

Rujukan:
ISO Standard (ISO/IEC/IEEE 29119-1) – Concepts and definitions

OBJEKTIF: PENYEDIAAN SPESIFIKASI KES UJIAN

- The **Test Basis** for each test item is analyzed;
- The features to be tested are combined into **Feature Sets**;
- The **Test Conditions** are derived;
  - The **Test Coverage** items are derived;
  - **Test Cases** are derived;
  - **Test Sets** are assembled.
  - **Test Procedures** are derived.

TOPIK YANG DIAJAR

- Pengenalan Dokumen
- Langkah-langkah
- Keterangan Dokumen
- Contoh Pengisian

PENGENALAN SPESIFIKASI KES UJIAN

- The **Test Case Specification** identifies the test coverage items and the corresponding test cases derived from the test basis for one or more feature sets.
- Test cases should be **repeatable, verifiable and traceable back** to the test basis

LANGKAH-LANGKAH

1. Determining in which test areas low-level or high-level test cases are appropriate

2. Determining the test technique(s) that will enable the necessary test coverage to be achieved. The techniques that may be used are established during test planning.

3. Using test techniques to design test cases and sets of test cases that cover the identified test conditions

4. Capturing bi-directional traceability (e.g. between the test basis, test conditions and test cases)

5. Identifying necessary test data to support test conditions and test cases

6. Designing the test environment and identifying any required infrastructure including tools

1. Penetapan tahap keutamaan bagi test case adalah berdasarkan kepada fakta yang dirujuk seperti daftar risiko, *historical facts* dan lain-lain.

2. Merujuk kepada dokumen **Spesifikasi Rekabentuk Ujian**, **BRS, SRS, SDS, pemilik projek atau pasukan projek** bagi mengesahkan maklumat. Memastikan versi yang betul bagi dokumen rujukan.

3. Pastikan **Traceability Matrix** juga dikemaskini.

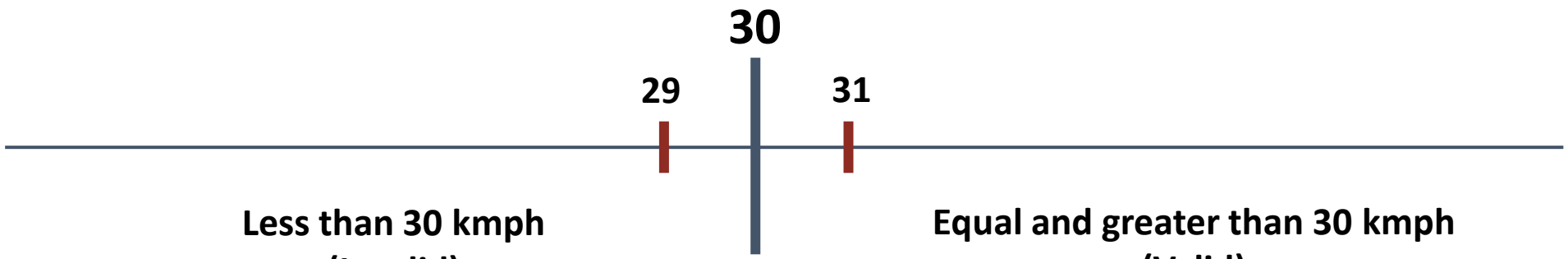
KETERANGAN DOKUMEN

ID Test Coverage	Nombor unik bagi liputan ujian
Keterangan	Keterangan ringkas mengenai kes ujian
Keutamaan	Keutamaan liputan ujian
ID Test Case	Nombor unik bagi kes ujian
Objektif	Objektif kes ujian
Keutamaan	Keutamaan kes ujian
Rujukan Test Condition	Penjejakan kepada test condition
Pra-Syarat	Pra-syarat bagi membolehkan kes ujian dilaksanakan
Input/langkah-langkah	Turutan langkah-langkah dalam melaksanakan kes ujian
Jangkaan Hasil	Jangkaan hasil bagi kes ujian
Hasil Sebenar	Hasil sebenar yang diperolehi setelah kes ujan dilaksanakan
Keputusan Ujian	Keputusan/ status kes ujian sama ada Lulus atau Gagal

KETERANGAN DOKUMEN

ID Ujian	LMS.02
ID *Test Condition*	TCN.02.01
Keterangan	LMS is active, LCS is active when the car speed exceed 30 kmph (kilometre per hour)
Objektif	To ensure the LMS properly functions when the vehicle is going at least 30 kilometre per hour
Keutamaan	High (due to localization)
Teknik Rekabentuk Ujian	Equivalence Partitioning Boundary Value Analysis
Rujukan SRS	A.2.2, A.3.2.2.1

2 Partition, with 3 Boundaries



Test Cases : 3

CONTOH

ID Test Coverage	TCV-02-01-01, TCV-02-01-02, TCV-02-01-03		
Keterangan	• Cover all valid and invalid test cases • 100% coverage		
Tahap Keutamaan Test Coverage	All test coverage is high		
ID Test Case	TC-02-01-01, TC-02-01-02, TC-02-01-03		
Objektif	To ensure LMS activate when the vehicle speed at least 30 kilometre per hour		
Tahap Keutamaan Test Case	All test cases is high		
Rujukan Test Condition	TCN.02.01		
Pra-Syarat	• LMS is inactive • LMS system light = Yellow		
Input/langkah-langkah	**Jangkaan Hasil**	**Hasil Sebenar**	**Keputusan Ujian**
TC-02-01-01 **Masukkan input 29 kmph**	• LMS is NOT activated • LCS is NOT activated		
TC-02-01-02 **Masukkan input 30 kmph**	• LMS is activated • LCS is activated		
TC-02-01-03 **Masukkan input 31 kmph**	• LMS is activated • LCS is activated		

ID Modul	TM02
Test Condition	TCN.M02.01
Keterangan	Sub Modul Penetapan Pengguna
Objektif	• Memastikan pengguna yang mempunyai akses kepada submodul ini adalah pengguna yang betul berdasarkan prinsip *authentication* and *authorization* • Memastikan Pentadbir Sistem dapat melaksanakana aktiviti pentadbiran berkaitan pengguna seperti pendaftaran pengguna sistem, reset kata laluan pengguna dan tetapan peranan pengguna. Pengguna berdaftar dapat mengakses sistem berdasarkan peranan yang ditetapkan • Aktor: Pentadbir Sistem/Urus Setia JK4P
Priority	**High**
Teknik Rekabentuk Ujian	Use Case Testing
Rujukan ID SRS	2.3.3, 3.2.4 (use case ID)

CONTOH

ID Test Coverage	TCV.02.01.01, TCV.02.01.02, TCV.02.01.03
Keterangan	Cover main path and alternative path 100% coverage
Keutamaan Test Coverage	All test coverage is high
ID Test Case	TC.02.01.01, TC.02.01.02, TC.02.01.03
Objektif	Urus Setia JK4P dapat melaksanakan pendaftaran pengguna dan menetapkan peranan pengguna
Keutamaan Test Case	***High***
Rujukan Test Condition	TCN.M02.01
Pra-Syarat	Urus Setia JK4P berjaya login dan mempunyai akses untuk peranan sebagai Urus Setia/Pentadbir Sistem

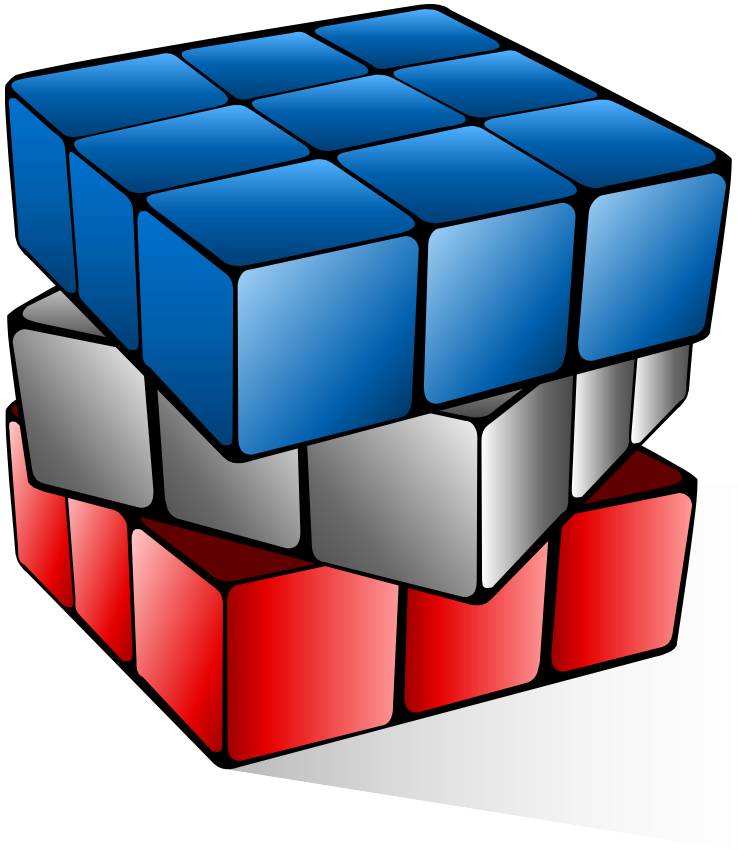
***Flow* Utama**	**Turutan Langkah**	**Keterangan**
TC02.01.01	1	Urus setia melaksanakan pendaftaran pengguna sistem
TC02.01.02	2	Urus setia melaksanakan penetapan peranan pengguna
***Flow* Alternatif**	**Turutan Langkah**	**Keterangan**
TC02.01.03	1a	Urus setia membatalkan pendaftaran pengguna

SPESIFIKASI KES UJIAN

SISTEM DASHBOARD MUDAHCARA DAN INTERVENSI PROJEK NASIONAL (MyMInD)

MAMPU BERSAMA-SAMA MELAKSANAKAN TRANSFORMASI VERSI BETA

Spesifikasi Kes Ujian



KAJIAN KES

How I Feel
When I find a BUG
TestingWhiz
Code Less, Test More

Unit Pemodenan Tadbiran dan Perancangan Pengurusan Malaysia

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TERIMA KASIH