**1. The speed control system has the following characteristics:**

* **at a speed of 50 km/h or less — the system does not respond**
* **at a speed of more than 50 but less than 55 km/h — the system issues a warning**
* **at a speed of more than 55, but less than 60 km/h — the system will issue a fine**
* **at a speed of more than 60 km/h — the driver will receive a fine and a penalty point in the driver's license**

**The speed in the system is measured in integer values. Which of the test data sets can be used to test all the boundary values of the equivalence classes?**

**A. 0, 49, 50, 54, 59, 60**

**B. 50, 55, 60**

**C. 49, 50, 54, 55, 60, 62**

**D. 50, 51, 55, 56, 60, 61 - Correct Answer**

**ANSWER:** In my opinion the correct answer is D. The reason behind it is:

* For answer A we don’t have a boundary value to test the last statement at a speed of more than 60 km/h — the driver will receive a fine and a penalty point in the driver's license”
* For answer B, no values to test the last three statements
* For answer C there is no value to test the third statement “at a speed of more than 55, but less than 60 km/h — the system will issue a fine”

**2. A fitness app counts the number of steps and sends messages to encourage the users to move. Depending on the number of steps, the feedback will be as follows:**

**Up to 1000 inclusive – “Couch potato”**

**From 1000 to 2000 inclusive – “Bit lazy, huh”**

**From 2000 to 4000 inclusive – “Keep moving!”**

**From 4000 to 6000 inclusive – “Nice!”**

**Over 6000 – “Amazing job!”**

**Which test data set will provide the best coverage of equivalence classes?**

**A. 0, 1000, 2000, 3000, 4000**

**B. 1000, 2001, 4000, 4001, 6000**

**C. 123, 2345, 3456, 4567, 5678**

**D. 666, 999, 2222, 5555, 6666 - Correct Answer**

**ANSWER:**

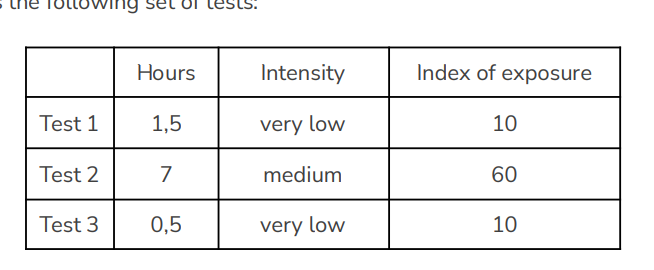
* Class 1: [0-1000]
* Class 2: [1001-2000]
* Class 3: [2001-4000]
* Class 4: [4001-6000]
* Class 5: [6001-...]

Considering the classes above, answer D covers 4 classes while the other three only cover 3 classes.

**3. A device that measures the time and intensity of sunlight received by a plant counts a**

**combination of parameters: time in the sun (less than 3 hours, 3 to 6 hours, and more than 6**

**hours) and light intensity (very low, low, medium, high). There is the following set of tests:**



**What is the minimum number of additional test cases required to ensure that all valid**

**equivalence classes are covered?**

**A. 1**

**B. 2 - Correct Answer**

**C. 3**

**D. 4**

**ANSWER:** Considering that there are additional classes that need to be tested - the class “3 to 6 hours for time in the sun, and low and high light intensity - We need two additional test cases at least, one that tests a time within 3 to 6 hours (for example 4 hours) combined with low intensity for example. Also, a second one to test light intensity.

**4. The video playback application has requirements. The application will work on devices**

**with this resolution:**

* **640x480**
* **1280x720**
* **1600x1200**
* **1920x1080**

**What test case is the result of applying the equivalence partitioning technique? Support your answer.**

**A. Check that the application plays video on a 1920x1080 display (1 test case)**

**B. Check that the application plays video on 640x480 and 1920x1080 displays (2 test**

**cases)**

**C. Check that the application plays video on displays of all sizes specified in the**

**requirements (4 test cases)**

**D. Check that the application plays video on any display size specified in the**

**requirements (1 test case)**

**ANSWER:** There are four classes, for each resolution. So we need to test the four classes, so we need 4 test cases.

**4. We keep working on a cat photo sharing app. Write requirements for the app that would regulate the minimum and maximum size of photos the users can upload to the system. Also, mention the following parameters: minimum length of comments under photos, maximum length of comments under photos (the more parameters you come up with, the better).**

**Write test cases that incorporate equivalence partitioning and boundary value analysis and will allow you to verify these requirements.**

* **Requirement 1:** Users can upload a cat photo with a minimum file size of 100 KB
* **Requirement 2:** Users can upload a cat photo with a maximum file size of 300KB
* **Requirement 3:** Users can comment on other users’ photos with a minimum of 50 characters
* **Requirement 4:** Users can comment on other users' photos with a maximum of 90 characters

Test Set Data - Requirement 1 and 2:

| **Equivalence Classes:** | **Boundary Levels:** |
| --- | --- |
| Class 1: 0 - 100 KB (invalid)  Class 2: 100 - 300 KB  Class 3: <300 (invalid)  **Values to test:**  **99**  **101**  **301** | BVA: 99  BVA:100  BVA:101  BVA: 299  BVA:300  BVA:301 |

**Test Case 1:**

Steps:

1. User opens CatSharing App on the test device
2. Users sign in using email and password
3. The user clicks on the “Upload” button in the bottom menu
4. Select a cat photo from your device photo gallery with 99 KB size file
5. Click on the “Publish” button at the bottom of the screen frame

**Test Case 2:**

Steps:

1. User opens CatSharing App on the test device
2. Users sign in using email and password
3. The user clicks on the “Upload” button in the bottom menu
4. Select a cat photo from your device photo gallery with 101 KB size file
5. Click on the “Publish” button at the bottom of the screen frame

**Test Case 3:**

Steps:

1. User opens CatSharing App on the test device
2. Users sign in using email and password
3. The user clicks on the “Upload” button in the bottom menu
4. Select a cat photo from your device photo gallery with 301 KB size file
5. Click on the “Publish” button at the bottom of the screen frame

Test Set Data - Requirement 3 and 4:

| **Equivalence Classes:** | **Boundary Levels:** |
| --- | --- |
| Class 1: 0 - 49 chars  Class 2: 50 - 90 chars  Class 3: <91  **Values to test:**  **49**  **51**  **91** | BVA: 49  BVA:50  BVA:51  BVA: 89  BVA: 90  BVA: 91 |

**Test Case 1:**

Steps:

1. User opens CatSharing App on the test device
2. Users signs in using email and password
3. User clicks on the search icon button in the top menu
4. Users writes the friend username in the search bar
5. Click on the friend photo icon displayed in the screen
6. Click on the first cat photo in the friend profile
7. Write a comment with 49 characters in the description field below the cat photo

**Test Case 2:**

Steps:

1. User opens CatSharing App on the test device
2. Users signs in using email and password
3. User clicks on the search icon button in the top menu
4. Users writes the friend username in the search bar
5. Click on the friend photo icon displayed in the screen
6. Click on the first cat photo in the friend profile
7. Write a comment with 51 characters in the description field below the cat photo

**Test Case 3:**

Steps:

1. User opens CatSharing App on the test device
2. Users signs in using email and password
3. User clicks on the search icon button in the top menu
4. Users writes the friend username in the search bar
5. Click on the friend photo icon displayed in the screen
6. Click on the first cat photo in the friend profile
7. Write a comment with 91 characters in the description field below the cat photo