



# *#CTHackATAhon*

20, 27, 28 June 2020



## #CTHackATAhon2020

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### Welcome to the #CTHackATAhon2020

This document has all the challenges. Please do note that the Jenkins job have to replicate them in the order they are define. Your video presentation should also show the solved challenges in the order that they are defined below. Preferably recording the continuous running of Jobs one after the other. Jobs should be named as that of the challenge too.

Please note that you are free to use any technology or any tool or any framework with a simple rule that the code created for solving the challenge has to be moved to your own GIT repository which you have created during the Setup time. The timing details are stringent, as the servers will be brought down by 7:15 PM IST.

**Please note that any automation recordings that you have to do, has to be done before the servers go down.**

**Every challenge has multiple steps. One single job should have solution to all the steps.  
Please only create separate Jenkins (or equivalent tool) job for every challenge.**

Good luck.

Have fun and happy learning

**Thanks from the entire Jury Team**

### Jury



**Durgesh Joshi**  
Director OE PSO Lead  
Amdocs



**Rakesh Kondreddy**  
Lead Quality Engineer  
Postman



**Nagesh Deshpande**  
Test Lead  
Cynosure, A Zensar Company



**Aditya Garg**  
Steering Committee Member  
Agile Testing Alliance



**Anand Vyas**  
Solution Architect, Principal  
Consultant  
Agile Testing Alliance



**Sumit Mundhada**  
Test Automation Lead  
Vodafone Shared Services India



**Prasad Watve**  
Head of DevOps Consulting  
Tieto



**Bharathi Venugopal**  
Senior Manager  
Siemens Healthineers  
Development Center

The challenges start from next page.

# Challenge 0 (Zero) – API Testing

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Challenge 0 has 3 problems (A,B,C). There should be a single job for this challenge with solutions to these 3 problems.

Information for the Rest API end points are below

- <http://35.188.114.237:8088/> This is the website for Rest API for User Registration website.

API Documentation / Endpoints

## Get all Users

Request type GET /api/v2/users

```
curl --location --request GET 'http://localhost:8088/api/v2/users'
```

## Add / Register a user

Request type POST /api/v2/addusers

```
curl --location --request POST 'http://localhost:8088/api/v2/addusers' \
--data-raw '{
    "name": "Adam",
    "surname": "Sindler",
    "adress": "Boston"
}'
```

## Update an existing user

Request type PUT /api/v2/updateuser

```
curl --location --request PUT 'http://localhost:8088/api/v2/updateuser' \
--data-raw '{
    "id": 15,
    "name": "Adam",
    "surname": "Sindler",
    "adress": "New York"
}'
```

## Delete and existing user

Request type DELETE /api/v2/{id}/deleteuser

```
curl --location --request DELETE 'http://localhost:8088/api/v2/9/deleteuser'
```

## Problem A Challenge 0 (10 Marks)

- i. Get All The Registered Users
- ii. Read all the Id's for the registered users from the JSON response
- iii. Display the id's for the registered users on the system console
- iv. Assert that the status code for the response received is correct.

## Problem B Challenge 0 (10 Marks)

- i. Create a request for adding a new user with the following details – 1 mark
  - a. Name : <your best friends name>
  - b. Last Name: <Your best friends last name>
  - c. Address: <Some dummy address or use CThackATAhon>
- ii. Capture the User id generated
- iii. Create a new request for updating the same user with information added/modified for name, lastname and address
- iv. Create a new request for deleting the user with id captured in step above.
- v. Make sure to test the response code for all the steps above
- vi. Create a new request for deleting non existing Id, assert the error and ensure that the test passes. It is a negative test.

## Problem C Challenge 0 (10 Marks)

- i. Create a request for adding a new user with the following details – 1 mark
  - a. Name : <your family member name>
  - b. Last Name: <Your family member last name>
  - c. Address: <Some dummy address or use CThackATAhon>
  - d. Capture the userid generated
- ii. Visit the following URL <https://cpsatexam.org/index.php/challenge-0/>
- iii. Now deleting the user with id captured in step above.
- iv. Visit the URL <https://cpsatexam.org/index.php/challenge-0/> and confirm that the user details are not displayed

# Challenge 1 (One) – UI Testing - >Localization testing

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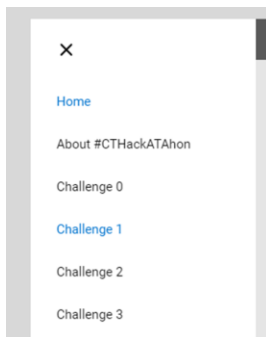
Challenge 1 has only 1 problem statement, which is A.

## Problem A Challenge 1 (20 Marks)

1. Visit <https://cpsatexam.org/>
2. Click on the hamburger menu (three line menu) (image below)



3. Click on Challenge 1 (image below)



4. The new page may show up a PopUp (Intermittent), handle that
5. The page shows 4 sections like below.

## Challenge 1

+ Para1 (tamil)	>
+ Para2 (hindi)	>
+ Para3 (kannada)	>
+ Para 4 (french)	>

For each of the para's above.

- Click on the + sign.
- Extract the language from the para heading
- Extract the text content for that para
- Use <https://translate.google.com/> to translate the respective language from the Para heading to English.
- Print the translated content on the system console.

Please note that the number of para's and their languages may change at a later point of time (new release of the software). Your automation code should run irrespective of the number of para's and their language. The Dev Team keeps on adding or deleting or modifying the language content and wants the CT (Continuous Testing) team to help validate this page regularly.

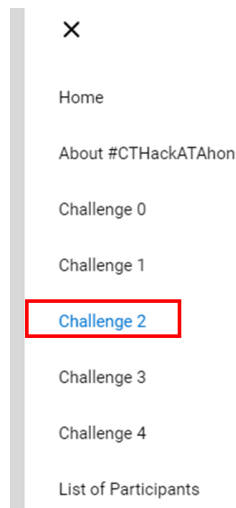
# Challenge 2 (Two) – Broken Links and Visual Validations

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Challenge 2 has two problems, A and B.

## Problem A Challenge 2 (10 Marks)

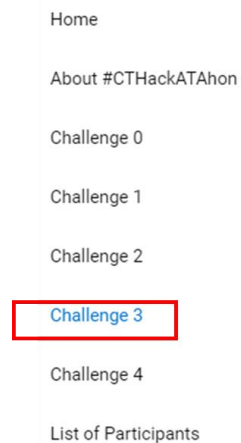
1. Visit <https://cpsatexam.org/>
2. Click on the hamburger menu (three line menu) (image below)
3. Click on Challenge 2 (image below)



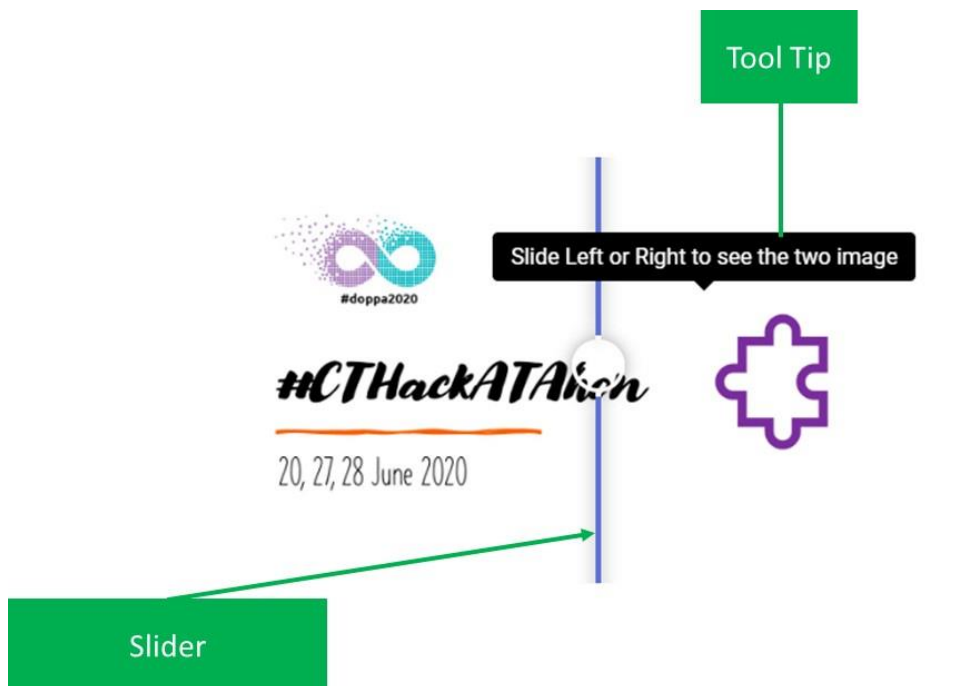
4. The page has speaker images, which are clickable. Please try to click on each of the images on this page and find out if the page that opens up has some errors or not. If there are errors, capture those errors and save it in a JPEG format. Also copy the text message of the errors displayed.
5. Please note that the speaker images may increase or decrease. The dev team is eager in adding and deleting speakers and wants the CT team to check that the page is working fine or not.

## Problem B Challenge 2 (10 Marks)

1. Visit <https://cpsatexam.org/>
2. Click on the hamburger menu (three line menu) (image below)
3. Click on Challenge 3 (image below).



4. It will open a page showing two images which are visible when the slider is moved left or right. Please see image below.





5. Validate that the tool tips is "Slide Left or Right to see the two image". If the tool tip is incorrect we have to still test the next steps. The test should not abort here if the tool tip is incorrect.
6. Validate that the blue line (slider) can be moved to extreme left and then again to extreme right. (slider functionality check)
7. There are two different images. Do a visual validation of the two images and confirm if the two images are the same or different.
8. Dev Team keeps on changing the images and tool tips, the CT team has a job to create validations such that the images are not hardcoded and the checks are done on the images which exists on every new release.

## Challenge 3 (Three) – Social Media checks, and data driven Form Validations)

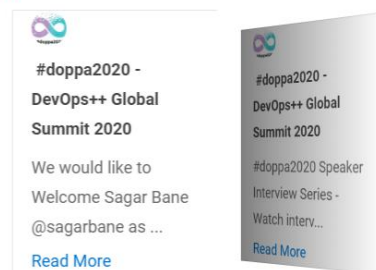
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Challenge 3 has two problems only, A and B

### Problem A Challenge 3 (10 Marks)

1. Visit <https://cpsatexam.org/>
2. Click on the hamburger menu (three line menu) (image below)
3. Click on Challenge 4
4. It shows 10 latest Tweets from @doppaconf

#### #doppa2020 twitter Feed



5. You have to extract the message from each of the tweet **e.g. "We would like to Welcome Sagar Bane @sagarbane as ..."**. Then click on **Read More** – which takes to

the respective tweets on twitter page. **Verify that the tweet text begins with the extracted text.**

6. Please do note that the tweets are dynamic and they may change as the new tweet posts are done on the doppaconf handle. Your tests should not fail when new tweets are made. The validation should be done for all the 10 tweets shown on the Challenge 4 page.

## Problem B Challenge 3 (20 Marks)

1. Visit <https://cpsatexam.org/>
2. Click on the hamburger menu (three line menu) (image below)
3. Click on forms
4. It shows an input form

### Form


The image shows a contact form with the following fields and labels:

- \* First Name**: Input field with placeholder text "First Name"
- Middle Name**: Input field with placeholder text "Middle Name"
- \* Last Name**: Input field with placeholder text "Last Name"
- \* Email**: Input field with placeholder text "Email Address"
- \* Subject**: Input field with placeholder text "Subject"
- \* Your Message**: Textarea with placeholder text "Your Message"

5. Create an excel sheet with the number of columns equal to the number of fields. Along with expected error messages. You can add more columns as you deem necessary
6. You have to **create all negative tests** such that the field validations are performed. Validate the error messages generated and the error messages from the excel file. Each row in excel should have no more than one error field. **Thus you cannot combine more than one negative tests in a single row of excel sheet.**

7. One such negative test which should be the first one and the most important one is to check if the email address entered is correct or not. Design an excel row and validate that the error message is correct or not.

e.g. if we enter a in first name, b in middle name, c in last name, t in email and c in subject and c in your message and hit Submit form. **The error message should be "Please include an '@' in the email address. 't' is missing an '@"**

* First Name	Middle Name	* Last Name
<input type="text" value="a"/>	<input type="text" value="b"/>	<input type="text" value="c"/>
* Email		
<input type="text" value="t"/>		
<div> Please include an '@' in the email address. 't' is missing an '@'.</div>		
<input type="text" value="c"/>		
* Your Message		
<input type="text" value="c"/>		
<input type="button" value="Submit Form"/>		

## Challenge 4 (Four) – Mobile validations

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Challenge 4 has two problems, A and B – this has to be performed on pCloudy platform

### Problem A Challenge 4 (10 Marks)

**This is a manual test to be performed on pCloudy platform.** You have to perform these test steps manually on your choice of 1 android device. Run these on chrome browser

Visit <https://cpsatexam.org/>

1. Click on the hamburger men
2. Open the link -> List of participants.
3. Verify that all the four columns are visible on the page
4. Verify that the dropdown is working fine or not
5. Verify that the search is working fine or not.
6. Analyze the same steps on various network (2G, 3G, etc)
7. Record your manual tests and save the recordings – you have to submit this.

## List of Participants

Sr. No	Name	Designation	Organization
1	Kanwarpreet Singh Khurana	Test Automation Consultant	Infosys Limited
2	Siddharth Polke	Software Test Team Lead	Amdocs
3	Hemant Mane	Scrum Master	Capgemini
4	Abhishek Mangudkar	Senior Engineer - Automation Testing	Enel X Services Pvt Ltd
5	Sapna Sahu	Functional Test Engineer	Amdocs

## Problem B Challenge 4 (20 Marks)

**This is an automated test to be performed on pCloudy platform. (You have to integrate this in your Jenkins pipeline)**

You have to perform these test steps on a choice of 1 android device. Run these on chrome browser if it is android device.

1. Visit <https://cpsatexam.org/>
2. Click on the hamburger men
3. Open the link -> List of participants.
4. Extract the list of all the participants and print them on system console or log file.

5. **Please note that the number of employees may change – so the code should run irrespective of the number of rows in the table.** This is true as development team will keep on adding employees and the CT team is expected to validate if everything is working fine.
6. **Please use restAPI server to add an employee and check on mobile device whether the new employee is added or not (URL is <https://cpsatexam.org/index.php/challenge-0/>)**
7. **Please use restAPI server to delete an employee and check on mobile device whether the earlier user added has been removed or not.**

## Challenge 5 (Five) – Multi Browser Test

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Challenge 5 has one problem only A

### Problem A Challenge 5 (30 Marks)

All the tests from Challenge 1, Challenge 2 and Challenge 3 above, please run them in parallel on two browsers, firefox and Chrome. The grid can be locally setup or remotely setup, such that the Jenkins job can be executed automatically when the earlier jobs are executed.

## Challenge 6 (Six) – Reporting

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Challenge 6 has one problem only A

## Problem A Challenge 6 (30 Marks)

As there are multiple jobs in Jenkins which are executed one after the other, multiple times. Please design a reporting system which can showcase job executions, fail, pass with drill down on the tests pass fail. Trend analysis. Any other reporting. You may use Grafana, Kibana or any other continuous reporting tools.

## Challenge 7 (Seven) – Continuous Security Testing - DevSecOps

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Challenge 7 has one problem only A

## Problem A Challenge 7 (30 Marks)

You have to design a DAST (Dynamic Security Application Test) for the Rest API for user registration. Please do not use the 35.188.114.237 server. This test has to be performed on a separate server. The end points will be the same. **Please request the organizers for the IP address whenever you want to perform such a test.** You will have to keep the organizers in loop when you are performing the tests.

## Challenge 8 (Eight) – Continuous Performance Testing

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Challenge 8 has one problem only A

## Problem A Challenge 8 (30 Marks)

You have to design a concurrency test for the Rest API for user registration. Please do not use the 35.188.114.237 server. This test has to be performed on a separate server. The end points will be the same. **Please request the organizers for the IP address whenever you want to perform such a test.** You will have to keep the organizers in loop when you are performing the tests.

Concurrency tests is as below

1. Measure the response time for 5 concurrent requests for adding a new user, then for 10 concurrent requests for adding the users, then for 15, 20 and 25. Plot the server response time for such concurrency.
2. Repeat the steps for deleting the users. 5, 10,15,20,25 concurrent one. Use the same id's generated in step 1 for deleting.
3. If the server crashes, you have to let us know under what load did it crash. If the server does not crash, predict based on the results for tests 1 and 2 on what probable load the servers might crash.

## Thanks for participating in CTHackATAhon

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Hope you had fun.

Please do note that you have to record the test automation in action (all challenges getting executed) using any mechanism (your phone recording the action on your laptop) or using a meeting software like zoom or equivalent. All the servers will be brought down by 7:15 PM. Please plan on keeping last 30 minutes for the recording part. Remember submitting of recording is mandatory and has to be accomplished by 7:30 PM IST. Please also save your mobile testing recordings for both the manual and automation steps. You can use google drive or equivalent to share a link of your recordings.

Please also note that you have to do a self-evaluation. The google form link will be shared during the CTHackATAhon.