

TECHFEST 2021-22

WEB CRAWLER

TASK

Participating teams must create a tool that can crawl the sites on the given parameters to identify any adherence/ compliance issues that might exist and report back with suggestions.

PROBLEM STATEMENT

Participating teams create a tool similar in principle to 'Google Lighthouse' which would crawl their websites and report back the gaps in adherence/compliance and also suggest ways to fix them.

It must identify the following key components which would measure the adherence/compliance of the sites:

- **SSL certificate compliance** – Check all links in the site for URL validation of SSL (all hyperlinks should be https://), and verify the validity of the SSL certificate.
- **Cookie checker** – Verify cookies being used by the website, the cookie checker will scan the cookies on the website, and cookie consent verification links.
- **ADA compliance** – Check websites for:
 - Alt text in all images.
 - Color contrast for the site as per w3.org guidelines.
 - Accessibility issues to check the site markup for null tab index

GENERAL RULES

- Every team has to **register online** on the Techfest website for the competition. A **Team ID** will be allocated to the team on registration which shall be used for future references.
- A team can register at any point of time before **17th October 2021** and submit the final abstract and video (as mentioned in the [structure](#)).
- The decision of the organizers and/or judges shall be treated as final and binding on all. Techfest has all the rights to verify the identity and accuracy of the details provided by the participants.
- Techfest, IIT Bombay will hold no responsibility for any late, lost, or misdirected entries.
- The idea presented by the teams should be original (not protected by patent/copyright/technical publication by anyone else).
- Note that at any point in time the latest information will be that which is on the website.
- All modes of official communication will be through the **Techfest e-mail**.

STRUCTURE

ROUND 1: ABSTRACT SUBMISSION

In this round, teams will have to submit a brief Abstract about their tool. It must contain the following:

- **Statement of Problem**- Succinct definition of the problem addressed.
- **Objectives**- What is your motivation? What are the objectives the prototype is developed for?
- **Introduction to Proposed Solution**- A basic idea of the solution to attempt to propose. Also, explain the thinking behind the proposed solution.
- **Novelty of Approach (optional)**- Is there something unique to your solution (that gives your tool an edge over the other solutions)?

You must be very concise and to the point in the Abstract. It must not exceed two pages.

The Abstract (as a pdf) must be sent by email to webcrawler@techfest.org with the team details clearly mentioned in the email. The Team ID should be explicitly mentioned in the email subject and the abstract file must be in the form of 'TeamID_TeamLeaderName'. Any other name for the abstract file will not be accepted.

The last date for Abstract Submission is 24th October.

ROUND 2: DESIGN DOCUMENT SUBMISSION

Following is the list of contents that must be included in the Design document:

- **Introduction**
- **Understanding of Problem Statement**
- **Scope/Assumption**
- **Tools & Technology Stack**
- **Architecture Diagram (if any)**
- **Design (Implementation) Details**

A session will be conducted with the Subject Matter Experts to explain the further steps in designing the solution. Following this, the teams will be given two weeks to construct the design document of their solution.

Based on these submissions, the top 20 teams will be selected to implement their design.

ROUND 3: FINAL SUBMISSIONS AND PRESENTATIONS

This round will be held in two stages. First, the selected teams will have to submit the final implementation of their tool. Based on this, the top-scoring 5 teams will be asked to present the working of their solution to the Judges' Panel, based on which the final winners will be announced.

TIMELINE

Last date of registration	24 October
Abstract submission deadline	24 October
Sessions with MMC Expert	25-26 October
Design Document Submission	7 November
Top 20 teams selection	12 November
Demo Prep and Round 3 Submissions	12 November-3 December
Top 5 teams selection	6 December
Finale Presentation to the Judges Panel	15 December

COMPETITION RULES AND TEAM SPECIFICATIONS

1. Challenge is open to bachelor and master's degree students of any discipline
2. A team can comprise no more than 4 members. Students from different educational institutions can form a team.
3. Each team needs to nominate a point-of-contact member (the team leader).
4. Each team needs to submit all items listed above in Round 1 evaluation requirements before 24th October.
5. The originality of work is essential, and your team will be disqualified if found otherwise.

PRIZE

The prize money will be awarded to the top 3 winners via **NEFT** and will be processed within 30 working days after receiving the prize money from sponsors. Winners have to mail their bank details (immediately after the announcement of results) to kunal@techfest.org, in the format specified below.



FORMAT OF MAIL

Subject: Web Crawler, Team Id, Position (example - Web Crawler, WR211003, 1st Position)

BODY OF MAIL

1. Account Holder's Name
2. Account Number
3. Bank name and Branch name
4. IFSC Code
5. Photograph of Bank Passbook as a proof