

MOOC PORTAL AND FEATURES	
	Yes/No
<p>DESCRIPTION: All features that are available in NPTEL's current MOOC application hosted at <a href="http://onlinecourses.nptel.ac.in">onlinecourses.nptel.ac.in</a> are available in the MOOC application proposed by the CSolP, which would be a platform to develop and deliver online courses.</p>	
Provide the list of features not available if not covered in the list here.	
<b>SCALBILITY AND LOAD MANAGEMENT</b>	
Is the platform capable of load balancing based on traffic?	
Is the platform scalable for storage based on usage?	
Is the platform scalable on database side based on usage?	
Is the platform scalable for computation based on load?	
Is there a collaborative interface for tutors and students to work?	
<b>DEPLOYMENT AND SERVICES</b>	
Does the application integrate the course content with the cloud functionality?	
Is the portal hosted on a PaaS platform?	
Does scaling up or down happen in sub second periods?	
Course content developer need not know any coding to use the application.	
Will the cloud handle the aspects like monitoring, logging and security automatically?	
Does the database that the application uses, scale horizontally and integrate well with the application?	
Will the application upgrade without any impact to the end user?	
Does the platform allow scalability without any intervention from the user?	
Is there a provision for tutor and student to collaborate (like chats,forums)?	
Is there any restriction in the number of mail exchanges between student and tutors?	
Is there any provision for file sharing between tutor and users?	
After the course ends, are the course contents archived and still accessible to the user?	
What is the minimum time required by compute instances to boot up? [Answer in seconds]	
What is the maximum time required by compute instances to boot up? [Answer in seconds]	
Does the platform use low price compute instances that can be terminated at any time to reduce costs?	
How long does a query take to support internal data warehouse?	
Is apache beam compatible open source pipeline supported for data transformation?	
<b>MIGRATION REQUIREMENTS</b>	
The current platform is composed of coursebuilder open source software, nsjail open source software, GCP app engine, datastore, object storage, compute engine, cloud sql, bigquery and dataflow. Is any of this not supported in the proposed deployment? If yes, please give details.	
Will the deployment be done in data centres physically located within India?	
Will the migration be done within a 2 week period?	
Will CSolP guarantee no Service outage during the period of migration?	
Will the modular functionality of the application be kept intact?	
Does the CSolP guarantee the same performance after migration as observed in the current platform?	

Current platform supports google logins with sso integration. Will the user directory migration be done?	
Current platform has API's built on top of Nsjail. Will the APIs be migrated too?	
<b>HOSTING AND MAINTENANCE</b>	
Description :The entire hosting of the MOOC application needs to be managed by the CSolP. All services related to the application and its deployment needs to be managed fully by the CSolP	
Can the CSolP perform the following tasks:	
1. Fix any identified bugs within the required time period as decided mutually?	
2. Add features as required by NPTEL on a regular basis. A list of features and timelines/priorities needs to be maintained always with a clear roadmap for the application. This will be mutually agreed upon between the CSolP and NPTEL?	
3. Train NPTEL staff on usage of any new features?	
4. Work and assist NPTEL staff with access to data generated by the application?	
5. Optimize continuously and find out ways in which cloud usage charges can be reduced?	
6. Work with NPTEL faculty and course staff to meet their requirements in offering courses and evaluating students through assignments?	
7. Can a detailed user manual for all types of users be maintained all time and be available online?	
<b>STAFFING AND COSTING</b>	
The CSolP is expected to hire/depute software engineers, coders, architects and managers of suitable background and experience for working on this project.	
Is the detailed management plan provided as part of the technical bid ?( This plan should clearly describe the number of CSolP personnel involved in this project and their expertise/experience levels)	
Will there be a dedicated program manager who is the overall in charge of the project from the CSolP who will be available 24/7 ?	
Will one solution-cloud-certified architect with leadership abilities be provided ?	
Will the architect interact seamlessly with NPTEL staff for feature enhancements and priorities?	
Will four coders/software engineers of suitable experience and expertise be provided for this project?	
Will the coders and software engineers be available during working hours and also interact with NPTEL staff for all operational aspects of the application ?	
<b>SERVICE LEVEL AGREEMENTS AND PENALTIES</b>	
Does the CSolP guarantee 99.999% uptime for the application under any concurrent user scenario?	
Downtime of the portal - For every hour of portal downtime, a penalty of Rs. 1 lakh will be imposed on the CSolP. Do you agree to this?	
Is it possible to fix any bug that is classified as critical by NPTEL within 2 hours?	

Is it possible to fix any bug that is classified as serious by NPTEL within 24 hours?	
Is it possible to fix any other bug within 3 days?	
Do you agree to the condition that the CSolP will forego payment for the period of time for which the above 3 service level requirements are violated?	
On days when high usage is expected (like an exam day or assignment deadline day), will online support from coders and/or architect be provided?	
SCHEDULE OF WORK	
NPTEL currently has a running live MOOC portal with more than 30 lakh users and more than 750 course instances. Is it possible for CSolP to migrate entire data without any break in service?	
Please confirm that the below timelines are acceptable:	
Date from award of contract	
2 weeks: -Deploy the application on the CSerP infrastructure -Testing by NPTEL	
4 weeks: -Migrate data from onlinecourses.nptel.ac.in -Test of migrated data by NPTEL -Test of the deployment for concurrency	
5 weeks: -Go live on the CSolP's deployment	
Do you agree with the above timeline ?	

**FORM B**

Mention the url of the current portal that is live and running:				
<b>PORTAL FEATURES</b>	YES	NO	Any data to be entered	Is this a costed service?
<b>CONTENT</b>				
DESCRIPTION: Deals with the content on the portal				
Where are the videos for the courses sourced from?				
Is there a cost for maintaining the video repository?				
Is there a place holder below the video to add additional video links, reference material, etc?				
Can lecture notes be uploaded on the portal?				
Can description about the video be added for each video?				
Can a student post a question at any particular moment by pausing the video that directly goes to the discussion forum?				
is there a provision to add self assement question below a video?				
Is there a way to provide a feedback about the video content below the video itself? (mention the process)				
Does the user have to complete watching content and completing assessment to move to next module?				
Does the application support self paced courses (based on whenever a user enrolls, the scheduling of the course corresponds to it)				
Can the course instructor view the contents of a particular week from the point of view of what a student would see without making the contents live?				
<b>ASSIGNMENT</b>				
DESCRIPTION: Deals with the assignment configuration on the portal				
Does the application support assignments?				
If yes: which of the following does it support?				
Multiple choice questions (auto graded)				
Short answer - fill in the blank questions (autograded)				
Essay type questions (manually evaluated)				
Document upload (manually evaluated)				
Peer review assignments (done by learners in the course)				
Programming assignments (autograded)				
<b>ANSWER THE SECTIONS BELOW BASED ON ASSIGNMENT FORMATS SUPPORTED</b>				
In case of Multiple Choice Questions, are the number of options variable and configurable or are they fixed?				
Are multiple choice questions with more than one correct answer supported?				

Is it possible to award partial marks for correct options chosen for Multiple choice Question that has more than correct answer?				
Short answer questions with answers of numeric type:				
(a) Answers entered are matched against a value that is set exactly				
(b) Can the answer entered be matched to a range of values by setting the lower and upper bound?				
(c) Can multiple answers (exact or range) be set against which to be matched?				
In alphanumeric type short answers:				
(a) Can the responses entered be evaluated with case sensitivity being a configurable parameter?				
(b) Can multiple answers be set against which to evaluate?				
<b>PROGRAMMING ASSIGNMENTS</b>				
DESCRIPTION: Used in programming courses where the user has to enter a piece of code that is auto evaluated against pre set test cases.				
Is the code accepted auto graded and evaluated?				
Give more information about the platform and its capabilities in this respect.				
Can the instructor see the working of the solution to ensure the test cases are configured correctly?				
Can we configure public test cases that will be displayed along with expected output?				
What are the programming languages accepted?				
Can the prefix and suffix code be predefined so that the user only writes a few lines to complete it and evaluation the entire code is what happens?				
<b>SUBJECTIVE ASSIGNMENT - MANUAL GRADING</b>				
DESCRIPTION: This type includes assignments in form of essays (typed on the portal) or reports, derivations etc. which will be submitted by uploading the document				
What are the formats of documents that can be uploaded for grading?				
Can a candidate upload a document from a same mail ID (which he/she has enrolled) multiple times?				
Whether there is any provision to allocate the submitted documents to particular evaluator?				
Is there a provision to upload the score of the assignment for all candidates using a single command onto the portal?				

Is re-assignment of submissions possible to other evaluators if required?				
<b>PEER REVIEW ASSIGNMENT</b>				
DESCRIPTION: This is a method where assignments submitted by learners are evaluated by other learners in the course.				
Can the learner share an essay or document in this type of assignment?				
Can the number of reviews be defined by course instructor for each submission?				
Is there a dashboard for the Course instructor to monitor the assignment allocation and review going on?				
Does the learner get feedback and scores for his submission?				
<b>OTHER ESSENTIALS COMMON TO ASSIGNMENTS</b>				
Can an image be uploaded instead of typing the question ?				
Can the options also be uploaded as images?				
Are linked questions supported in the Assignments?				
Is there a feature to assign negative marks for questions individually?				
Is the number of submissions by a learner in a course configurable by Course instructor for every assignment (be it autograded, programming or subjective)?				
In case of multiple submission, which assignment is considered for the evaluation?				
When is an assignment evaluated - as soon as it is submitted or after the due date?				
Is there a provision to use LATEX to type in Math formulae?				
Before going live, can the configured assignment be tested by course instructor by submitting the answers and checking the score?				
Can the course instructor alter the due date of the assignment after it is made live?				
Can the course instructor make changes to the assignment once it has gone live?				
Is there a way to display the score of the last submitted assignment once the assignment deadline expires?				
Are the correct answers set by instructor and answers marked by the learners visible once the deadline of assignment expires?				
Is there an option for the course instructor to download the assignment score for those who have submitted the assignment?				
Is there a provision to view the answers submitted by every student for a given assignment?				

<b>INTEGRATING NEW TOOLS REQUIRED AS COURSE LEARNING AIDS</b>				
DESCRIPTION: NPTEL offers engineering courses primarily, many of which require the support of tools				
Does the portal facilitate to support integration of tools like Verilog, Matlab, etc?				
<b>ROLES ON PORTAL:</b>				
Management of the portal is a crucial aspect and requires several roles to be defined, that have different permissions and access to data.				
Mention the roles available in your application and answer the below as relevant with the role that can do it.				
<b>SUPER ADMIN/COURSE INSTRUCTOR</b>				
DESCRIPTION: For each question mention if this activity can be done and who can do it.				
Mention any other role that you have on the portal too and if they have permissions for any of this activity.				
Who can add/remove a course on the portal?				
Who can allocate a course admin for a course?				
Who can change any content in the course?				
Does the super admin possess a dashboard which contains basic information regarding the courses?				
Can a candidate who has withdrawn from a course accidentally be force-enrolled?				
Who can create the introductory page to the course?				
Who can create and manage the announcements and discussion forums?				
Who can open and close enrollments to a course? Is it controlled by date? Is it open till the course ends? Can it be controlled by admins?				
Permission to put out announcement emails in a course (current and archived)				
Are the following course statistics available? If yes, who can access them?				
Profile details of enrolled candidates				
Assignment marks of candidates individually				
Viewing the assignment submitted by any user				
Re-evaluate an assignment if required - changing the answer for a question or deleting a question				
Video watch analytics of users				
Monitoring of evaluation of subjective assignments that require manual intervention				
<b>COURSE LEARNER</b>				

What is the login required to enroll to any course?				
Does the learner post a query and reply in the forum?				
Can the learner receive the forum interaction as email?				
Can the learner view his/her assignment score for the submitted assignment? If yes, when?				
Can the learner withdraw from an ongoing course?				
Can the learner attach to a mentor if available?				
<b>LOCAL CHAPTER SPOC</b>				
DESCRIPTION: NPTEL works with colleges across the country and every such college that has an NPTEL Local Chapter has a coordinator designated as Single point of contact or SPOC for NPTEL.				
Does the SPOC possess a separate login on the portal that allows him/her to access data relevant to participants from his/her college?				
Can new Local Chapters and the SPOC email ids be added on the portal?				
Can the SPOC view the total number of participants and their details?				
Can the SPOC designate faculty members from their college as mentors course wise?				
Can The SPOC has a provision to view the course wise participant list?				
Does the application support the feature of the SPOC applying for fee waivers if applicable for the final certification exam?				
Is the data inside his login updated on the portal dynamically?				
Can the SPOC download the data in the form of CSV and excel?				
<b>MENTORS</b>				
DESCRIPTION: This is a feature open only to NPTEL Local Chapters. Colleges that wish to mentor their students and monitor their progress in assignments can assign faculty members in the same domain as mentors in a particular course. These mentors also have to enroll to the course.				
Can the mentor view the details of the student regarding the submission of assignment and also view the assignment score?				
<b>ENROLLMENT PAGE AND DETAILS</b>				
Are the details in the enrollment form customizable as per NPTEL requirements?				
For a student or faculty member, is there an option which checks if a candidate is part of a Local Chapter or not?				



Can the candidate update his/her enrollment details at any point of time? Can this feature also be closed by the NPTEL admin?				
Does the user get a Welcome email on enrolling to a course?				
<b>FORCE ENROLL FEATURE</b>				
DESCRIPTION : This occurs when a candidate withdraws from a course accidentally				
Is there a provision to enroll the candidate back in case he/she has withdrawn from the course? If yes explain				
<b>ANNOUNCEMENTS TO LEARNERS</b>				
DESCRIPTION: Used for posting announcement to candidate as course progress				
Can announcements be posted on the portal for an ongoing course?				
Is there a provision to e-mail the announcement to candidates individually?				
Can the announcement be created earlier for all weeks and kept private and sent as required?				
<b>DISCUSSION FORUM</b>				
Mention the application that is used for the Discussion forum or if it is built inhouse				
Does the forum have the capability for moderating messages and not allow direct posting?				
Can any learner be blocked from posting if required?				
Is categorization of the forum possible week wise?				
Can duplicate and best answers be tagged so that learners can benefit from this?				
Can the user subscribe to the forum by email to receive the posts as email?				
<b>TEST COURSES/WHITELISTED COURSES</b>				
DESCRIPTION: Used for training new associates and testing features				
Is there provision to create and offer a course for a select audience and not visible to anyone else?				
<b>ADDITION OF NEW FEATURES THAT ARE COMPATIBLE WITH NEW INITIATIVES OF NPTEL ON REQUEST</b>				
Is it possible to make changes in the portal in UI on request of NPTEL?				
Can new types of assignments be added to the portal on request?				
Can existing features be made more flexible and customized on request?				
<b>LIVE SESSIONS</b>				

The portal must also have the capability to facilitate live interaction between the Course instructors and the users - in the form of live chat that is in typed format or in the form of video (face-face) interaction.

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<b>Cloud solution provider (CSolP)</b>			
CSolP shall be a company registered in India and should be operating in India for at least the last 5 years offering similar services. They should have a minimum total turn-over of Rs. 100 crores, the last 2 years put together.	Yes	No	Annexure 1 and 2
CSolP will implement and manage the solution directly without any organizational or other intermediary (s).	Yes	No	
CSolP has a demonstrable track record of management of such services.	Yes	No	Give copies
<b>Application</b>			
The application does not contain software which requires licenses to be bought by NPTEL.	Yes	No	
The entire source code of the application will be available to NPTEL and should reside on a repository owned by NPTEL.	Yes	No	
NPTEL can have the option to release the source code under the open Apache license in case it decides to do so.	Yes	No	
The application is in use in a current live MOOC portal.	Yes	No	Give the url of the live portal.
The above live portal has hosted at least 500 courses since 2014.	Yes	No	Give the list of courses and respective urls with details of enrollments and duration of course, assignments submitted, any other activity log on the portal.
The above live portal has seen more than 30 lakh enrolments in total since 2014.	Yes	No	Give proof of the enrollment numbers.
There is at least one course on the above live portal that had more than 1 lakh enrolment.	Yes	No	Give the name of the course and the url.
<b>Cloud deployment for NPTEL</b>			
The deployment will be on a public cloud offered by a renowned and reputed Cloud Service Provider (CSerP) and will have standard disaster recovery mechanisms.	Yes	No	Mention the standard disaster recovery mechanisms with examples of how it has been done for instances in the past.
The private student and course data of the deployment will be on machines situated physically inside India.	Yes	No	Mention the list of data centres within India.
The CSolP must be a certified partner of the CSerP.	Yes	No	Provide proof of the partnership doc.
The deployment will solely be for NPTEL and no other party will be using the application or parts of it for any other purpose.	Yes	No	