Course outline

How does an NPTEL online course work?

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

Download videos

Text Transcripts

Modern Application Development

This course assumes that the student knows how to develop a typical monolithic desktop single user application. We gradually morph such a desktop app into a web app that uses distributed components and serves multiple users at the same time.

In this process, we see how familiar ideas like user interfaces, data storage, and front-end vs backend distinctions get reformulated in the new web aware distributed context. We discover how the assumption of multiple users via multiple access points adds new concerns such as identity management and security, and learn techniques for addressing them.

At the end of this course you should be able to build a basic distributed web app and analyse constituent elements of the web and mobile applications that you use daily.

INTENDED AUDIENCE : B.E/B.Tech, B.Sc, M.E/M.Tech, M.S, M.Sc
PREREQUISITES : Undergraduate Programming Experience
INDUSTRY SUPPORT : All Industries that use Computing

Prof. Aamod Sane
Flame University, Pune
Persistent Computing Institute, Pune

Prof. Abhijat Vichare
Persistent Computing Institute, Pune

Prof. Madhavan Mukund

Chennai Mathematical Institute

Madhavan Mukund studied at IIT Bombay (BTech) and Aarhus University (PhD). He has been a faculty member at Chennai Mathematical Institute since 1992, where he is presently Professor and Dean of Studies. His main research area is formal verification. He has active research collaborations within and outside India and serves on international conference programme committees and editorial boards of journals.

He has served as President of both the Indian Association for Research in Computing Science (IARCS) (2011-2017) and the ACM India Council (2016-2018). He has been the National Coordinator of the Indian Computing Olympiad since 2002. He served as the Executive Director of the International Olympiad in Informatics from 2011-2014.

In addition to the NPTEL MOOC programme, he has been involved in organizing IARCS Instructional Courses for college teachers. He is a member of ACM India's Education Committee. He has contributed lectures on algorithms to the Massively Empowered Classroom (MEC) project of Microsoft Research and the QEEE programme of MHRD.

COURSE TYPE

Elective

COURSE LEVEL

Undergraduate

COURSE LAYOUT

Week 1 and 2 : From desktop application to internet application
Week 3 and 4 : Stateful applications
Week 5 and 6 : The front end
Week 7 and 8 : Databases and Simple files
Week 9 : Setting up a website
Week 10 : Using third party web services
Week 11 and 12: Extended project

BOOKS AND REFERENCES

Nil

CERTIFICATE

• The course is free to enroll and learn from. But if you want a certificate, you have to register and write the proctored exam conducted by us in person at any of the designated exam centres.
• The exam is optional for a fee of Rs 1000/- (Rupees one thousand only).
• **Date and Time of Exams: 25th April 2020**, Morning session 9am to 12 noon; Afternoon Session 2pm to 5pm.
• Registration url: Announcements will be made when the registration form is open for registrations.
• The online registration form has to be filled and the certification exam fee needs to be paid. More details will be made available when the exam registration form is published. If there are any changes, it will be mentioned then.
• Please check the form for more details on the cities where the exams will be held, the conditions you agree to when you fill the form etc.

CRITERIA TO GET A CERTIFICATE:
• Average assignment score = 25% of average of best 8 assignments out of the total 12 assignments given in the course.
• Exam score = 75% of the proctored certification exam score out of 100
• Final score = Average assignment score + Exam score

YOU WILL BE ELIGIBLE FOR A CERTIFICATE ONLY IF AVERAGE ASSIGNMENT SCORE >=10/25 AND EXAM SCORE >= 30/75.
• If one of the 2 criteria is not met, you will not get the certificate even if the Final score >= 40/100.
• Certificate will have your name, photograph and the score in the final exam with the breakup.It will have the logos of NPTEL and IIT Madras. It will be e-verifiable at nptel.ac.in/noc.
• Only the e-certificate will be made available. Hard copies will not be dispatched.