

Systems Programming

This course is concerned with the design and development of software applications that reside on specific systems, which takes into account systems constraints. For instance web programming, multimedia development, mobile computing, app development, and robotics are examples of relevant Platforms/Systems that provide specific services/APIs/hardware that constrain development. Topics includes: Overview of platforms (e.g., Web, Mobile, Game, Industrial), Programming via platform-specific APIs. Overview of Platform Languages (e.g., Objective C, HTML5). Programming under platform constraints. Web programming languages (e.g., HTML5, Java Script, PHP, CSS). Web platform constraints. Mobile programming languages. Challenges with mobility and wireless communication. Location-aware applications. Performance/power tradeoffs. Mobile platform constraints. Emerging technologies.