

# Campus Printer System

A system that allows students to upload documents and pull prints from machines around the campus.

User represents an arbitrary user in the college system. A user has ID, name and email address.

User
- ID: String
- name: String
- email: String

Document
- docID: String
- filename: String
- sizeMB: int
- pages: int

Each User can have one printing account. The account can only be logged in at one machine at a time.

PrintAccount
- ID: String
- balance: double
- uploads: ArrayList[Document]
- jobList: ArrayList[PrintJob]
- signedIn: boolean
+ PrintAccount(String ID): PrintAccount
+ getBalance(): double
+ topUp(double amount): void
+ calculateBalance(double amount): double
- changeBalance(float amount): void
+ createJob(Document, boolean color, boolean bothSides): PrintJob
- sendToPrinter(PrintJob): void
+ print(Document): void

Printer models a particular printing machine, and keeps information about paper and ink toner levels.

Printer
- printerID: String
- tonerLevel: float
- paperLeft: int
- printQueue: ArrayList[PrintJob]
+ queueJob(PrintJob): void
- dequeue(PrintJob): void
<u>canPrint(PrintJob): boolean</u>

PrintJob
- jobID: String
- status: String
- file: Document
- color: boolean
- bothSides: boolean
+ PrintJob(Document, boolean color, boolean bothSides): PrintJob
- setStatus(String status): void
<u>calculatePrice(Document): double</u>

Omitted: Driver Class and utilities; some object methods.  
Some of the void methods can be changed to return boolean in the future, to get better error messages.