# Functional Requirements

## Client registration

* Client must be able to register their interest *online* and provide the following details when registering:
  + Name
  + Mailing address
  + Email
  + Age
  + Gender
  + Phone number
* Client must be shown terms and conditions and must be able to agree or disagree after registering
* Client must complete a **secure** online questionnaire to check whether the sample to be stored is at risk from various infectious diseases after agreeing to terms and conditions
* The system must create an online account for the client which is assigned a unique clientID if successfully registered
* System must notify client via email of second sample test results and advise whether or not their sample has been approved for storage
* Client must be able to add the following trustee details through their online acount once their test sample has been approved for storage
  + Trustee
    - Name
    - Mailing address
    - Email
    - DOB (for identification)
    - Phone number

## Client billing and payment

* Client must be able to pay via credit card for testing and storage fees and opt-in for direct debit of four equal installments when test is successful
* Annual and quarterly invoices must be issued by the system to client at least one month before due date
* Invoices must display the following when issued to the client
  + Company name
  + Company address
  + Company ABN
  + Invoice data
  + Invoice number
  + Client name
  + Client address
  + ClientID
  + SampleID
  + Invoiced items
  + Item price
  + Invoice total

## Client request to destroy sample

* The system must accept client or trustee requests via email to cancel and destroy the sample/s
* The system must respond to these cancellation requests via email which must include a link to a secure web form for client cancellation confirmation
* The system must alert employees that the cancellation form has been submitted to prompt destruction of sample

## Client refunds

* The system must refund the prorata annual fee to the client if their test sample is found to contain infectious disease/s and has been destroyed

## Sample collection and testing

* The system must record the following details when a sample is collected from the client
  + Name
  + Address
  + Requested pickup time/date
  + Courier firm authorised to transport sample
* Each sample collected must be assigned a unique identifier and will store the following data records associated with the sample’s unique identifier (sampleID) in a searchable database:
  + Test status
    - Initial sample
    - Waiting to be tested
    - Test pass
    - Test fail
  + Physical status
    - In transit to CCC
    - In storage at CCC
    - In transit to client
    - Delivered to client
    - Destroyed
  + Identification and location
    - Date of storage
    - FacilityID (3 char)
    - CSC number
    - CSC position
  + Medical information
    - Test log
  + Account information
    - Linked clientID
    - Client details
* The system must record the following details to the sampleID when the sample arrives at one of CCC’s facilities and transferred to a CSC:
  + Date of storage
  + FacilityID (3 char)
  + Fridge number
  + CSC number
  + CSC position
* Laboratory technicians must be able to log test results to the sampleID when testing for infectious diseases
* The system must alert employees if a sample is found to contain infectious diseases to begin the sample destruction process

## Internal system functions

* The system must record the following actions for auditory functions, which can only be accessed by Lab Manager
  + Data record creation
  + Data record modification
  + Data record access
  + Data record deletion
* The system must provide the Lab Manager the ability to create new staff users for staff that exist on CCC Human resources system

## Potential Requirements

* ~~The system must generate and send invoices to client~~ *~~x~~* ~~days before due date~~
  + See functional requirement **Client billing and payment**
* ~~The system must warn client if invoice is~~ *~~x~~* ~~days overdue and destruction of sample is imminent~~
  + Assumption
* ~~The system must advise client when sample is destroyed for overdue payment~~
  + Assumption

# Non Functional Requirements

* System must comply with Australian Privacy Principles
* The sample must be shipped in a cryo-shipping container marked by unique barcode while being delivered
* Medical information about client must be stored securely
* Sample destruction process must adhere to Australian Standard for disposal of biological samples
* Mobile development must use [Corona SDK](http://coronalabs.com/products/corona-sdk/)
* Credit card payments are only accepted via MasterCard or Visa
* Security requirements
  + Client account managers can only access
    - Client details
  + Lab technicians can only access
    - Sample data
    - Sample location data

# Assumptions

* Client registration only occurs online
* Invoices are generated and sent electronically
* Clients are warned if their payment is overdue and sample is to be destroyed
* Clients have grace period for late payment
* Clients are notified when sample is destroyed for late payment
* Refunds to client is via credit card reversal
* Refund is given to clients after cancelling their storage and requested their sample/s to be destroyed
* CCC Human Resources system already exists and assigns unique identifiers for each staff member

# Out of Scope

* Interfacing with external printhouse
* Refund process
* Shipping tracking
* Access requirements for employees that are not lab technicians or lab managers

# Questions

* Are invoices to be printed or sent electronically?
  + If printed, who prints? CCC or external printhouse?
* What are the business rules for invoices?
  + How long does a client get to pay bill?
  + When should the invoices be sent?
  + How long overdue before sample/s destroyed? Is there grace period?
  + Do clients get warning before that happens?

# Record Prototype

* ClientID
  + Details
    - Name
    - Mailing address
    - Email
    - Age / DOB
    - Gender
    - Phone number
  + Trustee
    - Name
    - Mailing address
    - Email
    - DOB (for identification)
    - Phone number
  + Payment
    - Credit card
    - Invoices
    - Installment plan
* Sample ID
  + Test status
    - Initial sample
    - Waiting to be tested
    - Test pass
    - Test fail
  + Physical status
    - In transit to CCC
    - In storage at CCC
    - In transit to client
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