



G6DHLL High Level Languages Coursework

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On-line post-graduate and post-doctoral application service

- | This is a software engineering project that is concerned with the automation of the application procedure to PhD and post-doctoral vacancies within the School of Computer Science and Information Technology.
- | The system will provide a user-friendly on-line application interface to applicants and will allow the storage of both partial and completed applications. Furthermore, the system is required to have management facilities for the staff reviewing the applications and also for posting new vacancies or modifying existing ones



Specification

- I Details needed from applicants:
 - As specified in the following database design, including (but not limited to)
 - Username and password to access/edit application
 - Attachments: CV, introductory letter or letter of intention/ research interests
 - 3 referees (name and contact details – email required). Referees are automatically emailed so can enter reference on line. Some method of dealing if no email?
 - Earliest date of availability for position
 - Any other material – for post-doctoral positions must include at least 2 publications uploaded as PDF files
- I Functionality of applicant section:
 - Can complete application in own time, not submitted until “Submit” clicked (then references are emailed) – but must complete required information before can save
 - See progress of completion of application? Pages saved to database before next page is displayed.
 - Log-in with unique username and password to access/ edit application until submitted, then can only see process of application
 - Files uploaded to a folder and attached to application. Given unique ID?
- I Referee section:
 - Emailed user ID (related to applicant ID) and password
 - Called each time candidate submits application, candidates can pick from previous references, or enter a new one
 - Details: name, confirm contact details, reference
 - Attach file to relevant application

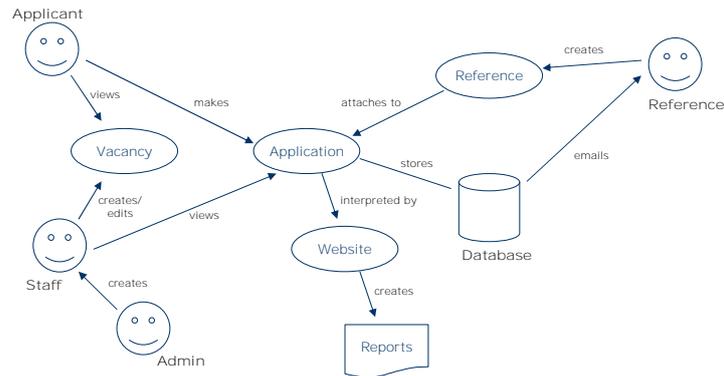


Specification (2)

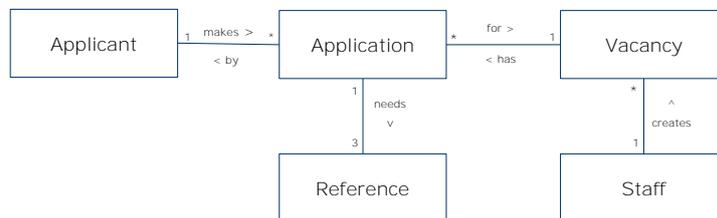
- I Vacancy section:
 - Vacancies divided by type, and sorted by application end date. If end date has passed are not displayed to applicants (or visibility can be set to false if position filled)
 - Option on vacancy page to apply for “this” vacancy, auto-fill vacancy number on application form
 - Details: as per later database specification
- I Functionality of staff section:
 - Admin can add staff members
 - Vacancies:
 - I Each staff member can only edit/delete own vacancies
 - I Browse who applied where
 - I Can mark viewed/ interview/ rejection for individual applicants – they can then see this status (can possibly accompany with email)
 - Statistics/ reports:
 - I Compute statistics of candidates by: age groups, gender, country of origin, etc
 - I Formatted report for each position. Print out of all applicants for a vacancy – cover page with vacancy details followed by applicant details (cover page for each applicant, letter, CV, references, any other material), with computed statistics
 - I Print reports and generate graphical visualisations of collected statistics
- I Additional requirements:
 - User Manual
 - On-line help



Initial Use-Case Diagram



Entity-Relationship Diagram



Preliminary database design



Preliminary Database Design

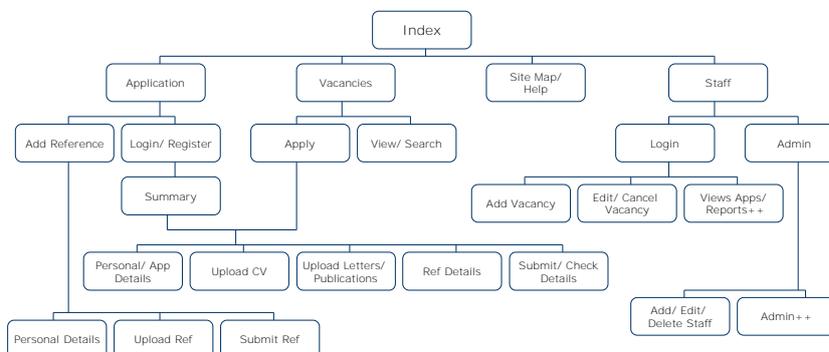
- | Applicant (AppID, username, password, title, fname, initials, sname, dob, gender, country_origin, address, postcode, cv, email, tel, ext, fax)
- | Application (AppID, VacID, letter_intention, RefID (x3), data_available, publication (x2), date_started, date_submitted, interview, successful, num_refs_added)
- | Reference (RefID, AppID, password, title, fname, initials, sname, position, address, postcode, email, tel, ext, fax, reference, date_emailed, date_reference)
- | Vacancy (VacID, StaffID, type, closing_date, start_date, duration, salary, job_title, details, num_apps, visible)
- | Staff (StaffID, username, password, title, fname, initials, sname, department, position, email, tel, ext, fax, admin)

Foreign Key, Primary Key, Initial Required field

- | Admin is a super-user of staff who can add more staff members.
- | Passwords crypt()'d, and compared with the stored hashes, if password forgotten then another is generated in the same way that reference passwords are.
- | ID's and usernames must be unique within their tables.



Preliminary Site Map



Login includes forgotten details/ Logout :: Applicant emailed after x days if application not finished :: Submission of application emails references



Preliminary list of PHP functions

```
| xhtml.fns (including list of countries for country of origin)
drawHeader($root, $title, $area)
- $area – staff (changes CSS), applicant, reference
drawLinks($root)
- $root - depends on links
drawProgress($area, $page)
- $page – so can highlight how through the application they are
showVacancies($searchTerm, $sort)

| login.fns
drawLogin($root, $area)
- Links to different pages depending on type of login
loginStaff/Reference/Applicant – also logout...
forgotDetails($area, $info) - $info – username/ password/ AppID
generatePassword?

| file.fns
uploadFile($userID, $type, $filename) – calls create folder if folder doesn't already exist
- Only allowed .pdf, .doc, .rtf files with specific icon/ $type - CV, publication, letter, reference
deleteFile($userID, $type, $filename)
createFolder($userID, $type)
displayFiles($userID, $type) – if no files then display a message
```



Initial Site Design

Design for applicant/
vacancy pages



On-line PHD and post-doctoral application service

Design for staff pages
– to distinguish



On-line PHD and post-doctoral application service



Initial Site Design (2)

Progress of Application/
Quick Links

Progress ::

- ▶ Personal Details
- Upload CV
- Vacancy Details
- References
- Upload Other Files
- Review and Submit Application

Quick Links ::

- University Main Site
- Computer Science
- ASAP Research Group

Login box/
Quick Links

Login ::

Please log in to view your application:

Username:

Password:

Forgotten details?

Quick Links ::

- University Main Site
- Computer Science
- ASAP Research Group



Initial Site Design (3)

The University of Nottingham

Home Browse Vacancies Applications Site Map Help || Staff

You are logged in as \$username [Logout]

Application - Personal Details

Title:

Initials:

Gender *:

Address *:

Country of Origin *:

Telephone:

Fax:

First Name *:

Surname *:

DOB (dd/mm/yy) *:

Postcode *:

Email *:

Ext:

* indicates default fields

Progress ::

- ▶ Personal Details
- Upload CV
- Vacancy Details
- References
- Upload Other Files
- Review and Submit Application

Quick Links ::

- University Main Site
- Computer Science
- ASAP Research Group



Initial Site Design (4)



Home Browse Vacancies Applications Site Map Help || Staff

Vacancies

Vacancy ID:	xxxxxxxx	Type:	PHD/Post-Doctoral
Title:			
Details:			
Salary:			
Start Date:	xx/xx/xx	Duration:	
Application Closing Date:	xx/xx/xx		
Contact:	Staff Name	Email:	xxxx@cs.nott.ac.uk

Vacancy ID:	xxxxxxxx	Type:	PHD/Post-Doctoral
Title:			
Details:			
Salary:			
Start Date:	xx/xx/xx	Duration:	
Application Closing Date:	xx/xx/xx		

Login

Please log in to view your application:

Username:

Password:

[Forgotten details?](#)

Quick Links

- [University Main Site](#)
- [Computer Science](#)
- [ASAP Research Group](#)