

## CS2501/CS5022/CS6505

### ASSIGNMENTS 1 & 2

[THIS IS A PAIR OF ASSIGNMENTS IN WHICH YOU ARE TO USE PHP AND MYSQL IN ORDER TO DEVELOP PART OF A WEB INTERFACE TO THE DREAMHOME DATABASE]

CONSIDER A COMMON SET OF OPERATIONS THAT MIGHT RELATE TO STAFF MEMBERS OF THE COMPANY:

#### QUERIES:

- FIND THE NAME CORRESPONDING TO A STAFF NUMBER
- FIND THE ADDRESS & PHONE FOR A GIVEN LAST NAME (THERE MAY BE SEVERAL)
- FIND THE STAFF NUMBER, LAST NAME AND FIRST NAME OF THOSE EARNING MORE/LESS THAN A GIVEN SALARY
- FIND THE ADDRESS OF THE BRANCH EMPLOYING A STAFF MEMBER
- FIND THE DESCRIPTION OF PROPERTIES ADMINISTERED BY A GIVEN STAFF MEMBER
- BROWSE THE DESCRIPTION OF STAFF MEMBERS ONE AT A TIME
- ETC.

#### INSERT:

- RECORD THE DETAILS OF A NEW STAFF MEMBER

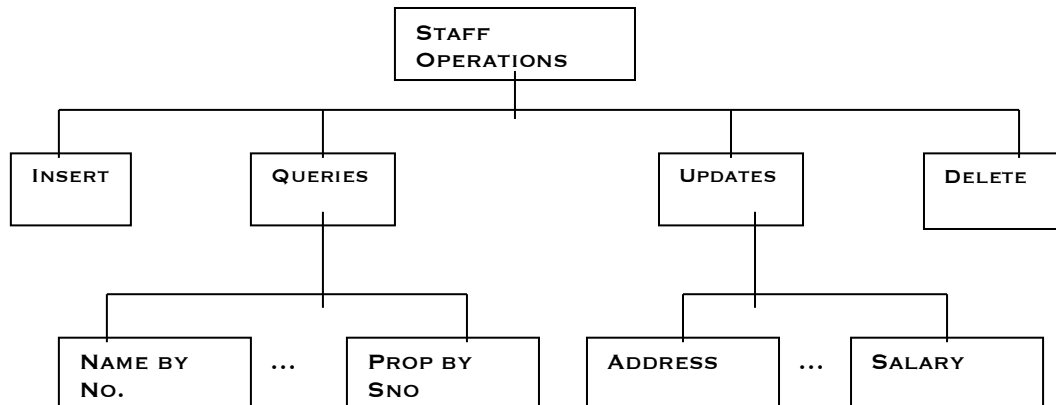
#### UPDATE:

- CHANGE THE ADDRESS OF A STAFF MEMBER, SPECIFIED BY STAFF NUMBER
- CHANGE THE SALARY OF A STAFF MEMBER, SPECIFIED BY STAFF NUMBER
- ETC.

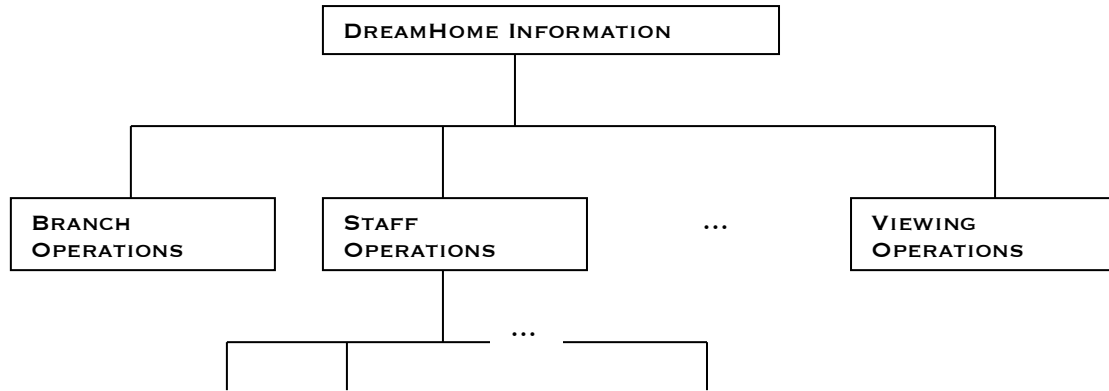
#### DELETE:

- REMOVE THE DESCRIPTION OF A STAFF MEMBER

IN A SIMPLE SYSTEM DESIGN, EACH OPERATION COULD BE IMPLEMENTED AS A SEPARATE PHP/HTML PAGE, AND THEN LINKED VIA A COMMON JUMP-OFF PAGE:



THE ABOVE PROCESS COULD BE REPEATED FOR BRANCH OPERATIONS, PROPERTY OPERATIONS, ETC. ESSENTIALLY, A LARGE INFORMATION SYSTEM DESIGN IS BEING ADDRESSED IN A DIVIDE-AND-CONQUER MANNER: BY WRITING SEPARATE PAGES FOR EACH IDENTIFIABLE OPERATION SET, THE SYSTEM CAN BE DEVELOPED IN A PIECEWISE FASHION. ULTIMATELY, THE SEPARATE OPERATION GROUPS COULD BE INTEGRATED INTO A MASTER JUMP-OFF PAGE, SO THAT THERE IS JUST ONE ENTRY-POINT INTO YOUR SYSTEM:



IN A REAL SYSTEM, YOU MIGHT HAVE TWO SEPARATE ENTRY POINTS – ONE FOR SYSTEM ADMINISTRATORS AND ANOTHER FOR GENERAL USERS – WITH SOME COMMONLY-ACCESSIBLE PAGES. NOTE THAT IT IS NOT ALWAYS CLEAR WHERE AN OPERATION “BELONGS”, E.G. IS “FIND PROPERTIES SUITABLE FOR A CLIENT” A PROPERTY-ORIENTED OPERATION OR A CLIENT-ORIENTED ONE; SHOULD “FIND THE PROPERTIES MANAGED BY A STAFF MEMBER” BE IN THE STAFF OPERATIONS OR THE PROPERTY OPERATIONS GROUP? IN SOME RESPECTS, THIS MAY BE RESOLVED BY ASKING WHETHER QUERIES SHOULD BE CATEGORIZED BY *INPUT* (THE SEARCH VALUE) OR BY *OUTPUT* (THE RESULT VALUE). MANY INFORMATION SYSTEMS ADDRESS THIS BY REPLICATING CERTAIN QUERIES [I.E. RE-USING THE SAME QUERY PAGE] IN DIFFERENT BRANCHES OF THE HIERARCHY.

### THE PROJECT

THE ONGOING PROJECT IS TO DEVELOP A REASONABLE PART OF THIS INFORMATION SYSTEM. YOU ARE NOT EXPECTED TO HAVE THE TIME TO ACCOMPLISH ALL POSSIBLE OPERATIONS. YOUR LEVEL OF KNOWLEDGE/IGNORANCE WILL DICTATE THIS, IN ANY CASE. ANYWAY, IF YOU CAN ACCOMPLISH TWO QUERIES IN EACH OF THE CATEGORIES, I PRESUME THAT YOU COULD DO THE REST, GIVEN SUFFICIENT TIME. YOU MIGHT ALSO IMPLEMENT ANY ONE TABLE INSERTION.

### THE ASSIGNMENT

FOR THE FIRST ASSIGNMENT WITHIN THIS PROJECT, I WOULD SUGGEST THAT YOU TACKLE THE STAFF OPERATIONS, SINCE WE HAVE SEEN SOME SUCH EXAMPLES IN CLASS.

VIEWING: USE [HTTP://WWW.CS.UCC.IE/~SORENSEN/STAFFCOUNT1.PHP](http://www.cs.ucc.ie/~sorensen/staffcount1.php) (ETC)

I WOULD SUGGEST THAT PARTIAL DEVELOPMENT OF ANY *TWO* BRANCHES OF THE TREE – AND THE JUMP-OFF PAGE – IS SUFFICIENT.

### EVALUATION

MOST OF THE MARKS WILL BE AWARDED FOR SIMPLY REACHING YOUR GOALS: DEVELOPING A SET OF PAGES THAT SUPPORT WEB-BASED INTERACTION WITH THE DREAMHOME DATABASE. THE OPERATIONS YOU IMPLEMENT SHOULD REPRESENT A BROAD CROSS-SECTION OF TYPICAL USER REQUIREMENTS [QUERIES BASED ON ONE OR SEVERAL INPUT VALUES, PERHAPS A BROWSING OPTION, ETC.]

APPROXIMATELY 10% OF THE MARKS WILL GO FOR DESIGN QUALITY. YOUR PAGES NEED NOT BE OBJECTS OF BEAUTY – BUT THEY SHOULD BE AT LEAST AS GOOD AS WHAT I PRODUCED [NOT HARD, SAYS YOU]. IT IS IMPORTANT THAT THERE BE A COMMON LOOK-AND-FEEL TO THE PAGES COMPRISING THE ENTIRE INFORMATION SYSTEM.