

Example projects:

CmpE496 HCI

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Project 1

The first project is to build a **currency conversion tool** that might be implemented on a portable device. It should allow conversions to/from Turkish liras, US dollars, British pounds, French francs, Japanese yen, and Canadian dollars. Users can choose the currencies and the amount.

- This is an intro to the Visual Basic (C, C++, java etc.) design environment. Just drag and drop controls to design the interface - no programming is necessary.
- It should use only a single form.
- Give a title, use some nice colors and fonts, offer instructions and a help button. Think of creative approaches to make this an appealing product.
- This is a group project by including necessary **database** and some of the **statistical operations**.

deadline is important.

Grading Criteria: Completeness, Comprehensibility, Consistency and esthetic design.

Here is an example currency rate table. You might use it.

Currency Name	
Exchange Rate	
Turkish liras	1 375 000
European -Euro	1.14
US dollars	1
Japanese yen	110.8700
French francs	6.658800
British pounds	0.624220

Example table:

Project 2

The second project introduces you to a variety of controls used in regular Visual Basic (C, C++) applications. You are to build a **Music products online Shopping interface**. There will be 10 items listed. Then the users check out and pay using their credit card.

The selection procedure is required as follows:

- The shoppers should login from a popup dialog box to access. Shoppers can choose one to the maximum numbers of the items from 10 music products items listed. Shoppers can choose from the two product types of CD or cassette. Shoppers have to pick one out of the 3 types of credit card (Visa, MasterCard & Discover) for payment. The default value (when the application is started) is NONE in the payment field. When they select the credit card type, a form opens up asking shoppers to input their sixteen digit credit card number and the expiry date (format mm/yy) and also the mail address. Any deviation from this should result in the system responding to the shoppers to correct the situation.
- This is a group project by including necessary **database** and some of the **statistical operations**.

Choose a [03'Top Ten Customer's Pick](#), with the Album, with the album names and the cover pictures. You might use this or get the raw materials from other place you like.

Grading Criteria: Completeness, Comprehensibility, Consistency and esthetic design.

Project 3

The third project is to build a fully functional **Photo Album System interface**. It is designed to allow a Photo Lab's customers to access and browse their album. They can select the photos they like and get printed copies mailed to them. The requirements are:

- The users should first verify their identity to access the Photo Album System. The registration will include their first name, last name, the mailing address, email address, the user ID and password they choose. They should be required to register if no such user record exists.
- The users' registration information should be saved in a User table. The information should be complete, the data is gotten from the first step. I provide you the data in the tables of an Access database. The tables you'll use are "Appearance", "Person" and "Photo". (The Person's name in the photo are gotten from the link of AppearanceID, PhotoID and PersonID in the Appearance table.) You are encouraged to use your own photo table as long as the table fields are complete and the database has enough data items (no less than 100 pictures). Users should be able to search the Photo Album System using a form fill-in approach. They can search by a person's name (there is a list of names in a photo), by country or year, and view all photos that match the query. For example, users could search for photos in '1999', or could ask for the intersection of 'Gurgen, Fikret', 'Turkey', '2003'. Users can request the Photo Lab to print and mail one or more photos. The users should fill in a "photo print request form" to ask for the photo to be printed. When they check out, they'll get a list of the photos they have requested and the available date of the photos. (The shop could provide the 1 day, 3 day and 1 week service options with the cost of \$0.30, \$0.20 and \$0.10 per copy)
- This is a group project by including necessary **database** and some of the **statistical operations**.

The project should be done in teams of two. You have a free hand in the design of the interface, i.e. it may be a single form, multiple forms, etc.

BONUS for Graphics (10%) --You can have thumbnail images associated with each photo. Again, they need not be exactly representative. You can build your own images or grab one from the web.

Create a photo album database

Grading Criteria: Completeness, Comprehensibility, Consistency and esthetic design.

Project 4

HCI: Models for Design

- [Guidelines](#), etc.
- Physical dexterity
 - [Keystroke-level model](#)
 - Fitt's Law: describes motor skill of pointing to a target (1954)
- Human cognition
 - Human information processing system (Card, Moran, Newell)
 - [GOMS](#): routine cognitive skills
 - Hick's Law
 - User/task scenarios
- [Tasks](#)
 - Task Action Grammar
- Interfaces
 - Program, Interpretation, Effect ([PIE](#)) (Dix and Runciman, 1985)

etc.

Grading Criteria: Completeness, Comprehensibility, Consistency.

- This is a group project.

Project 5

Speech input system for a limited vocabulary.

- Use your limited vocabulary
 - Process your speech samples by signal processing
 - Use a simple algorithm to classify your samples
 - Obtain the result
 - Also implement your HCI design by GUI
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- This is a group project.

Grading Criteria: Completeness, Comprehensibility, Consistency and esthetic design.

- **Also students may suggest projects!**