Course Overview

Business Software Applications (e-Commerce) - COMP1100

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About the Course

- **firm knowledge and understanding of selected business office tools in practical uses.**

  _Excel & Access_
Course Overview

Basics

1. Operational
2. Clicks and form filling exercises

Simple but powerful

1. Introduction to programming in VBA
2. Work with database in Access
Textbooks:

  - Chapter 3 Conditional logic, Chapter 8 Functions, Chapter 6 Loop

References:

  - Most important chapters:
    - Chapter 7 Select Case.........End Select
    - Chapter 11 Excel VBA Objects Part 4–The Range Object, Chapter 12 Working with Excel VBA Controls
Assessment:

Project 40%
Midterm Exam I 20%
Midterm Exam II 30%
Participation 10%
Final Exam 0% (Since 2020)

Total 100%
Projects 40% of total

2023’s topic: Preparing data for A.I. applications

Dictionary
Definitions from Oxford Languages · Learn more

application
əˈplɪkəˈʃ(ə)n/

noun
1. a formal request to an authority for something. “an application for leave”
   Similar: request, appeal, petition, entreaty
2. the action of putting something into operation. “the application of general rules to particular cases”
   Similar: implementation, use, exercise, em

What business applications??

AI Facts and Figures

• According to Statista, revenue from the Artificial Intelligence (AI) software market worldwide is expected to reach 126 billion dollars by 2025.

• As per Gartner, 37% of organizations have implemented AI in some form. The percentage of enterprises employing AI grew 270% over the past four years.

• According to Servion Global Solutions, by 2025, 95% of customer interactions will be powered by AI.

• A recent 2020 report from Statista reveals that the global AI software market is expected to grow approximately 54% year-on-year and is expected to reach a forecast size of USD $22.6 billion.

Some data also in https://data.world/datasets/ai, try Google!!!
**Introduction**

Recently A.I. applications surge! But the basic requirement is DATA! Before A.I. analysis researchers need to know the basics (profiling):

- What are happening recently (trend) to entities (e.g. functions, people, companies, industries, cities countries)?
- The comparison among entities (grouping).
- What may happen (predict)?

You are to help A.I. research, Objectives:

1. Track some **historical data** with potential business applications.
2. Present **reliable** and **easy to understand** analyses.
3. Based on your **results**, make business **advice**.
Your Project Tasks

- **Collect data**
  - You are free to choose the objects (a set entities, e.g. country) and collect that level of (e.g. country-level) data

- **Input data to Excel**
  - skills: validating, standardizing/speeding up input, etc.

- **Analyze data**
  - Excel skills: charting, tabulating, sorting, filtering, etc.

- **Prepare report and presentation**

**Report to me your findings by:**

- **Report writing**
  - a report on your study 3000 to 4000 words (Appendix text not counted)

- **Presentation of the report**
  - Bonus on good questions raised (for the whole group)
Skills requirements

In this project, you should investigate the current business affairs from internet resources.

You shall analyse data in a scientific manner.

Your friend-base and common sense are definitely your advantages but your visions over the market are all the more important.
• Submission of Group Registration
  - Before 5:30 in the first lesson (today)!
  - Hand-in by email and CC to all group members
    1. Random Group Formation, 4 groups in your class
    2. All member names and their student numbers
      • Format: Email Title: COMP1100-Grouping-{your group name}-{project title}
      • e.g. COMP1100-Grouping-BillySolo-Hardwork is good for workers

• Submission of collected data
  - Before 11:00pm, 11 Sept 2023 (Mon, one day before class)
  - Hand-in by email and CC to all members
    1. Data input in MS Excel data file
      • Format: Email Title: COMP1100-Data-{your group name}-{project title}

• Mid-term I
  - 2:30pm, 11 Oct 2023 (Wed, make-up class, M613)

• Demos and corrections on class
  - 24 Oct 2023 (Tue)
  - Submission of ALL you data again (to support your presentation)
  - Hand-in by email and CC to all group members
  - Format: Email Title: COMP1100-Demo-{your group name}-{project title}

• Mid-term II
  - 2:30pm, 15 Nov 2023 (Wed, make-up class, M613)

• Submission of Report & PowerPoint presentation for both classes
  - Before 11:00pm, 27 Nov 2023 (Mon, one day before class)
  - Email and CC to all members
    1. Your report in MSWord (according to the report template)
    2. Your presentation in MSPowerPoint
      • Format: Email Title: COMP1100-Report-{your group name}-{project title}

• Group Presentation on class
  - handed in the printed copy of your report right before your presentation on class
  - 28 Nov 2023 (Tue)

These are deadlines, you can submit earlier!!
* check my notice board for any possible change
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<th>Penalties</th>
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<td>• 2% per additional submission</td>
<td>• Outstanding work 5-10%</td>
<td>• Notable data collection bonus max. 20%</td>
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<td>• 1% per wrong entry of data</td>
<td>• 1% per hour of late submission</td>
<td>• Stunning result/comparison with tables, charts or statistical analysis, roughly equivalent to 2 - 4 % each</td>
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<td>• 10-25% deduction for each failed demo or presentation</td>
<td>- not able to perform sensible analysis with excel skills</td>
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The report - 50% of the total project

• Executive Summary (150-200 words) (10%)
• Background (5%)
  - The business problem(s)
• Methods (10%)
  - How do you investigate the problem? With what relevant variables/data you collected?
• Results (20%)
  - Good reasons of your selection of analysis e.g. by tabulating, charts, filter or VBA, etc.
• Conclusions (15%)
  - What can you tell with your analysis and charts?
  - What business can benefit from your report?
  - NB make good use of the course notes and your confidence to score!!

Discussions (15%)
• What difficulties did you overcome?
• What questions should you have set at the beginning so that you can use more powerful tools?
• What more analyses you can have?
• What did you learn from it?

• Members' Contributions (20%) (individual scoring)
  - Who did what? (group)
  - What did you do? And the difficulties you faced (individual reflection)

• Appendix (5%)
  - Useful information you think important in your analysis
  - Your programming codes
Essential ideas in report writing

• Step 1
  - Explain why the report is being written in the introduction.

• Step 2
  - Describe the source(s) of data
  - Explain the data sample was representative/relevant

• Step 3
  - Create graphs showing visual representations.
    • Tables, bar graphs, line graphs or pie charts for pertinent findings

• Step 4
  - Write conclusions after evaluating all the analysis results
    • include any suggestion you can make

• Step 5
  - Write an executive summary last, but put it at the front

The Presentation (of your report) – the other 50% of the project

• 25 min @ and 5 min Q & A

• Scoring criteria
  – Flow of presentation – 25 % (individual scoring)
    • Fluency, coordination, difficulty of the presented topics, etc.
  – Correct use of tools, analysis, and technologies – 35%
    • Answers for questions like: How, what, where, when and why, etc.
  – Critical thinking – 20%
    • Lesson learned, anymore improvement, etc.
  – Critical Listening – 20%
    • Any good questions raised for other groups?
Tips to score high

• Watch more news for better ideas
• Do something Billy didn’t teach!
  – use some other course material like Statistics, Marketing or Consumer Behavior
• Present your extra-work clearly!!
  – In both the report and presentation
• Ask sensible questions!!
• Meet all the deadlines !!!
• Practice before demos/presents !!!
  – at least once
Notice Board

http://analytics.mpu.edu.mo/billyyu/COMP1100/

• Updates, project materials and notices will be there.