Application Project

You will research a specific situation, either a job or a problem, and a specific computer technology that is offered as an aid for that situation. You will then create a handout about the situation, a presentation about the technology, and a spreadsheet showing monetary considerations for some combination of situation and technology.

Note that the ban on direct quoting of text from any source ***does[1]*** apply to this project.

You may work alone or in groups of up to 3 on this assignment; all group members should participate in all parts.

Concepts / Research

You will research both a situation and some computer technology that is marketed as an aid for this situation. This technology may be hardware, software, *or* networks. The situation must be either a job or a significant problem, and must be something that affects some people, but not most people.

Here are a few examples[2]:

- a physician's assistant who uses an Electronic Medical Record system
- missing medication deliveries which require signatures due to limited mobility, addressed with a smart doorbell
- an advertising designer who uses a graphics tablet
- difficulty reading text due to dyslexia, addressed with a browser plug-in that uses a specially designed font
- a golf course owner who uses a golf course management software package
- difficulty affording prosthetics for a growing child, addressed with a 3-D printer
- an architectural designer who uses a Computer Aided Design package
- cerebral palsy causing inability to use a standard game controller, addressed with a chin- or eye-based controller
- a professional dance DJ who uses a music management and mixing package
- a boutique clothing store manager who uses a sales website

The more specific your choice, for both situation and technology the better.

The technology you choose must be specific to the chosen situation, that is, it was originally created to be used in the situation or it has been marketed for that purpose.

---

[1] Claiming that you read this as "doesn't" will not save you. Copied text → ▪100%. No excuses. Copying from a text generator is still copying.

[2] These are only **examples**, you can choose any other professional activity and related technology.

Anything so general that most people use it, e.g. laptop, printer, spreadsheet, tablet, etc., is not an appropriate choice.

Since you will be arguing in your presentation about whether or not the technology is actually helpful to the situation, you cannot choose a technology that is intrinsic to the situation. For example, if the job you choose is a radiologist, an MRI machine is part of the job, not an aid to help with the situation.

Choose a specific, real technology that is available for purchase/use; if several companies make competing versions, choose one of those to focus on (though you may wish to compare more than one in your spreadsheet.. A technology that combines hardware, software, and networking would be acceptable, but you need only choose one of those.

Make sure that you choose a situation and technology that provide you enough to work with so that you can fill the requirements of the rest of the project.

About a job I would expect you to include information such as:

- What does a professional in this field do?
- What kind of degree or training do they need?
- What is the workplace like?
- How much do they make?
- How do they use computer technology other than the one you are presenting?
- How would they use the technology you are presenting?

About a problem I would expect you to include information such as:
- Who is affected by this problem?
- What causes it?
- What impact does the problem have on their lives?
- What strategies, other than adopting the technology you chose, are used to deal with it?
- Are there other technologies used to deal with this problem?
- How would the people affected use the technology you are presenting?

About the technology I would expect you to include information such as
- What does it do?
- How does it work?
- What is the interface like? Do you need special training to use it?
- What are the costs?
- How would it be used in this specific situation?
- For this situation, what are the benefits?
- For this situation, what are the drawbacks?

Part of your grade will reflect how you communicate this information in the following documents. Include a list of your sources in one of your documents.

Word

Create a 4 full page[3] (not fewer or more) document in Word that describes the situation you have chosen.

This document is **not** intended to be an essay or paper, but the kind of attractive handout you would give someone who was interested in the career and wanted to learn more.

This document is on the same topic but not directly related to the presentation; in this part, you are explaining the situation to people who are not familiar with it. You should also briefly introduce the technology, but focus on the situation.

Use your Word skillz to make good use of the four pages of space without having to write too much text. Part of the credit for this document will be for the overall design and professional presentation.

 Formatting:
 Your document must include each of the following:

- ✓ More than one font, and also other text formatting such as bold, italic, etc.
- ✓ A table
- ✓ At least two images
- ✓ A bulleted or numbered list
- ✓ A footnote or endnote
- ✓ A header or footer
- ✓ SmartArt

Each of these should be used appropriately to present your content. Credit would not, for example, be given for a table just used to put a decorative box around text or to make columns (which should instead be done using actual Word columns).

> **[EC +10]** Also include

- at least two Sources (make sure to fill in all the information for your sources)
- a citation in your document using each of your sources
- an automatically generated bibliography

Powerpoint

Create a 7-9 (not fewer or more) slide PowerPoint presentation as if you are trying to convince an individual in your chosen situation to adopt or not adopt the technology you researched, explaining how it would be used and the advantages and disadvantages.

---

[3] So, your content should fill from top to bottom of four pages viewed in Word.

This presentation is on the same general topic but does not cover the same material as the document in part B. In this part, you are presenting information about the technology in detail to people who already know about the situation.

In your presentation, use
- ✓ fonts and other text formatting
- ✓ at least two images
- ✓ shapes
- ✓ SmartArt

Do not include audio or video.

Excel

Create an Excel spreadsheet that covers monetary or time issues related to the situation and the technology you chose. The items to include will depend on your topics.

Here are some possibilities to consider:
- for a job
    - income for someone working in this profession
    - per-hour rates
    - prices of the goods or services sold in this profession
    - salaries of employees
    - yearly budget in this business
    - cost of equipment other than the chosen technology
    - time it takes to do a specific task involved in the job
- the problem
    - money necessary for other strategies to deal with the problem, such as hiring helpers
    - lost money, including income, due to the un-addressed problem
    - lost time, due to the un-addressed problem
    - costs of damage caused by the problem
    - costs of medical problems caused or exacerbated by the problem
- costs of the technology itself
    - buying or renting hardware
    - software licensing (how many licenses does the organization need?)
    - extra needed hardware such as connection cables or adapters, or upgrades to existing hardware to allow more complex software to run
    - installation fees
    - salary for trained operators
    - internet access costs
    - consumable resources such as ink cartridges, paper, etc.
    - maintenance costs, time spent on maintenance
    - helpline or support fees
    - training costs, training time

- o   manuals, textbooks
- savings that come with adopting the technology
  - o   saved cost on materials no longer needed
  - o   saved cost on equipment no longer needed
  - o   saved cost on employees or contractors no longer needed
  - o   time saved
- it would also be reasonable to include size/proportion information
  - o   how many people are affected by the problem
  - o   how many people are employed in the industry
  - o   how often the problem comes up
  - o   number of employees at a location
  - o   number of customers or tasks per day
- it would also be reasonable to include numbers from competing versions of the technology you chose or alternative technologies marketed for the same situation

Not all of these will apply to all situations. You should include all that apply for your topic. These must be real numbers, and you should include somewhere the source where you found them.

You must have at least five items (individual numbers).

If there is another type of numerical data related to your topic that you would like to use in a spreadsheet instead of money or time, please see me to discuss.

Put individual amounts in clearly labeled cells.

You must include at least one **formula** for some meaningful result based on these numbers, for instance the total cost for adopting the technology, the total profit for a month, the total savings for a year, etc… The formula must be written so that it would update if any of the other cells were changed.

You must include a **meaningful** graph or chart illustrating some or all of your data.

Also, use appropriately:
- ✓ fonts and other text formatting
- ✓ cell formatting (shading, outlines, etc)
- ✓ numerical formatting (percentage, dollar, etc)
- ✓ at least one of the following
  - o conditional formatting (data bars, sparklines, etc)
  - o if() formulas
  - o tables

So you might find that a professional snarfsnorgler gets through 1000 raw snarfs per month at $0.30 each and sells the snorgled version for $1.25, and the technology lets them snorgle 20% faster but costs $20 per month. You could put those values into a

spreadsheet and use formulas to find that they currently spend $300 but sell for $1250, making $950, but with the technology they would spend $380 and sell $1563, making $1183 per month. Then you could show those against each other in a bar chart and also use an if to check for and report whether or not adopting the technology improved income by at least 10 times its cost.

Credit will only be given for using these appropriately (i.e. tables are not used for making your data look pretty, they have a purpose.)

Grading

Your grade for this project will depend on
- 30% the Word Document – did you use the required formatting skills appropriately to create a professional, readable document that explains the situation?
- 30% the Powerpoint presentation – did you use the required formatting skills appropriately to create a professional presentation that explains how the technology applies to the situation and clearly argues whether it is a useful aid or not?
- 30% the Excel spreadsheet – did you use formulas to combine and graphs/charts to compare numbers related to your situation and technology in a meaningful way, and use formatting skills to create a professional spreadsheet?
- 10% the information – do your three documents contain and communicate information about both your situation and technology showing that you researched both and thought through how the technology would apply to the situation?

Turning in the Project

You may work alone or in groups of up to 3 on this project. If you work in a group, make sure to use Blackboard groups and turn in only one submission for the group.

Turn in your project through Blackboard by attaching all three documents (Presentation, Word Document, and Spreadsheet) to a single submission. **Do not** zip or otherwise reformat your documents. If your files do not display correctly in Blackboard[4] and open directly[5] in the appropriate Microsoft Office[6] programs, you will not receive credit.

---

[4] Blackboard will sometimes choke on complex documents and display some formatting incorrectly. Check that when you download your document it still opens and looks fine in Word; it is your responsibility to make sure you give me the document you intended.

[5] I shouldn't have to enter compatibility mode or anything like that.

[6] The online versions of Office may be missing some formatting tools you will need for this project; remember that you can install Office on your computer (see the video).