



Survival Guide
CGS2100
Exam 1
Chapters 1-5

Chapter 1: Using Technology to Change the World

- 1) Technology on the World Stage
 - a) **Social Networking**: the gathering of groups of people using online tools to connect and exchange ideas
 - b) Human Rights
 - i) www.ted.org
 - ii) The Witness Project
 - (1) Use media to share abuses of human rights
 - c) **The Digital Divide**: the term for the gap in levels of internet access and the availability of technical tools in different regions of the world
- 2) Technology and Our Society
 - a) Factors that lead to Better Personal and Performance Satisfaction
 - i) **Autonomy**: the freedom to work without constant direction and control
 - ii) **Mastery**: the feeling of confidence and excitement from seeing your own skills progress
 - iii) **Purpose**: simply the understanding that you are working for something larger than yourself
 - b) **Creative Surplus**: the ability of the world's populace to volunteer and collaborate on large projects
 - c) How We Think About Each Other
 - i) Women outnumber men in use of social media
 - ii) Marketing to the norm (ex: men between 25 and 34)
 - d) How We Connect
 - i) Marketing
 - (1) **QR (Quick Response) Codes**: lets any piece of print in the real world host a live link to online information and video content
 - (2) **Crowdsourcing**: checking in with the voice of the crowd
 - ii) Access Versus Ownership
 - (1) **Swap.com**: uses peer-to-peer connections to find the best matches to sell used DVDs, games, etc.
 - (2) **Collaborative Consumption**: joining together to use a product more efficiently
 - e) Technology and Your Life
 - i) **Computer Literate**: being familiar enough with computers that you understand their capabilities and limitations and you know how to use them efficiently
 - ii) Being a Savvy Computer User
 - (1) Avoids hackers and viruses
 - (2) Protects privacy
 - (3) Understands the real risks

- (4) Uses the internet and web wisely
- (5) Avoids online annoyances
- (6) Is able to maintain, upgrade and troubleshoot a computer
- iii) Preparing for Your Career
 - (1) **Information Technology (IT)**: a field of study focused on managing and processing information and the automatic retrieval of information
 - (2) **Data Mining**: the process of searching through huge amounts of data with the hopes of finding a pattern
 - (3) **Augmented Reality**: a combination of our normal sense of the objects around us with an overlay of information displayed
- iv) Psychology: You Should Smile... Now
 - (1) **Affective Computing**: computing that relates to emotion or deliberately tries to influence emotion
- 1) Technology in Focus: History of the P.C.
 - a) Altair 8000, the first personal computer (\$395.00 or \$498.00 which is about \$2,000.00 today)
 - b) No keyboard, monitor or printer
 - c) Data inputs on the front put in 1s or 0s and then gave the results of the programs
- 2) The Apple 1 and 2
 - a) **Steve Wozniac**, an employee of HP, became fascinated with the personal computer industry
 - b) **Steve Jobs**, working for Atari at the time, likes Wozniac's prototypes and together formed the **Apple 1**
 - c) **Apple Computer Company**: formed April 1st 1976
 - d) **Apple 2**: came in 1977 and was an improvement to the Apple 1
 - i) Had color monitor, sound and cost around \$1,300 at the time
 - ii) 4 kb RAM
 - iii) Optional floppy disk drive
 - iv) Most successful product in the company's early line
 - e) **Apple 3**: 1980 release
 - i) included spreadsheet programs, games, word processor
- 3) The Commodore PET and TRS-80
 - a) **Commodore PET 2001**
 - b) **TRS-80**
 - i) "a \$595 home computer"
 - (1) Immediately popular: sold 10,000 in first month
 - ii) 4 kb memory
- 4) **The Osborne**
 - a) The first portable computer, released in April 1981
 - b) Weighed 24.5 pounds
 - c) \$1,795
 - d) 64 kb memory
 - e) Following the release of **The Executive**, a successor to The Osborne, the Osborne company closed and Compaq bought the designs
- 5) IBM PCs
 - a) **IBM PC**



- i) IBM's first personal computer
- ii) Marketed through Sears and Computer land
- iii) \$1565
- iv) 64 kb memory
- 6) Other Important Advancements
 - a) **Hardware**
 - b) Advances in programming languages
 - c) The importance of BASIC
 - i) Programming languages: FORTRAN, ALGOL, COBOL
 - ii) **Beginners All-Purpose Symbolic Instruction Code (BASIC)**
 - (1) Revolutionized software
 - (2) Easy to learn
 - (3) Bill Gates and Paul Allen used it to write for the Altair and led to the creation of Microsoft
 - d) The Advent of Operating Systems
 - i) **Disk 2**: floppy disk designed by Steve Wozniac and was 5.25 inches, introduced in 1978
 - ii) **Disk Operating System (DOS)**: 1977, designed by Steve Wozniac, was the OS that controlled the first Apple Computers
 - iii) **The Control Program for Microcomputers (CP/M)**: developed by Gad Kildall, first OS designed for Intel 8080 chip, then founded his own company called Digital Research
 - iv) **MS-DOS**: based on **Quick and Dirty Operating System (QDOS)** developed by Seattle Computer Products
 - e) The Software Application Explosion: VisiCalc and Beyond
 - i) **VisiCalc**: created by Harvard Business School students Dan Bricklin and Bob Frankston, a spreadsheet program to be used on PCs
 - ii) Other spreadsheet programs: **Lotus 1-2-3** (1983) and **Microsoft Excel** (1985)
 - iii) **WordStar**: the first word processing application
 - iv) **Word for MS-DOS**: the precursor to **Microsoft Word**
 - v) **Graphical User Interface (GUI)**: allows users to interact with the computer more easily
 - f) **The Lisa and The Macintosh**
 - i) **Lisa**: the first successful PC that used a GUI, priced too high (at \$9,995)
 - ii) **Macintosh**: everything the Lisa had, and more and cost a third of the price
 - g) The Internet Boom
 - i) **Mosaic**: a web browser introduced in 1993 that caused web traffic to increase by 350%
 - ii) **Windows 95**: produced by Microsoft, included a web browser (Internet Explorer) and also Microsoft Office applications
 - h) Making the PC: Early Computers
 - i) The Pascaline Calculator and the Jacquard Loom
 - (1) **The Pascaline**: the first accurate mechanical calculator, created by French mathematician **Blaise Pascal** in 1642
 - (2) **Jacquard Loom**: a loom capable of weaving complex patterns