Essential Transferable Skill

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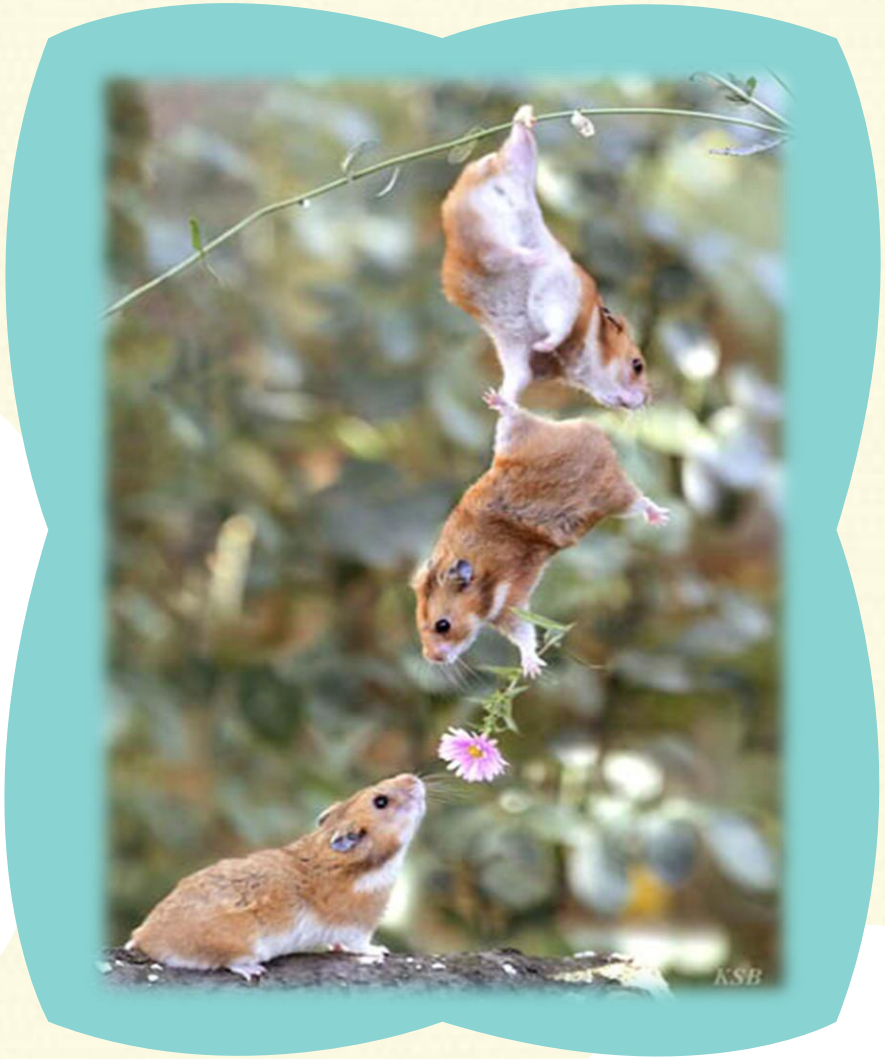
ESSENTIAL SKILL

Working in Teams	• The dynamics of a team and how to work within one is vital to the success of any project.
Scheduling	• Necessary to manage a project and arrive at a successful conclusion in a time efficient manner. It also focuses members of a team to diverge and converge at relevant stages of the project in order to provide an integrated solution.
Research Skill	• Important for collecting data, gathering information, and keeping up with the latest both technically and competitively.
Technical Writing	• Even with the most innovative design that may revolutionize the way people live, if it is not reported to the world, it will remain an unknown entity never to be adopted or adapted and ultimately will become a failure.
Presentation Skills	• This skill has provides the ability to reach one important person who will agree to support an idea all the way to the mass population who will buy it. As such, it is an extremely powerful reporting and marketing tool.



Working In A Team

Let's work together…

- Select individuals who complement each other.
- The Herrmann model developed a metaphorical model of the brain that consists of four quadrants :
  - A - preference are analytical, rational, technical, logical, factual, and quantitative.
  - B - preference people are procedural, scheduled, conservative, organized, sequential, reliable, tactical, and administrative.
  - C - preference students are supportive, interpersonal, expressive, sensitive, symbolic, musical, and reaching out.
  - D - preference thinkers are more strategic, visual, imaginative, conceptual, and simultaneous.
- LET'S TRY!

Characteristics of Successful Team

1. **A clear, challenging goal**; this goal gives the group members something to shoot for. The goal is understood and accepted by the entire group.
2. **A result-driven structure**; the roles of each member are clear, a set of accountability measure is defined, and an effective communication system is established.
3. **Competent and talented team members**.
4. **Commitment**; team members put the team goals ahead of individual needs.
5. **Positive team culture**. This factor consists of four elements: (a) Honest (b) Openness (c) Respect (d) Consistency in performance
6. **Standard of excellence**.
7. **External support and recognition**. Effective teams receive the necessary resources and encouragement from outside the group.
8. **Effective leadership.**

Team Forming Stage

Forming

- The group members still work as individuals; they do not contribute to the group as a whole but look out for themselves.

Storming

- The group realizes that the task requires collective contribution and not much has been done. This prompts disagreements, blaming, and impatience with the process.

Norming

- When the team's objectives are worked out collectively, the common problems or goals begin to draw individuals together into a group, although the sense of individual responsibility is still very strong.

Performing

- The team members have accepted each others' strengths and weakness and have defined workable team roles.

Effective Team Performance

- **Communication team behavior** : Team members need to create an environment in which all members feel free to speak and listen attentively.
- **Decision-making team behavior** : Decision making is done by the team, not for the team.
- **Collaboration team behavior** : Collaboration is the essence of team work; it involves working with others in a positive, cooperative, and constructive manner.
- **Self-management team behavior**

Roles in a Team

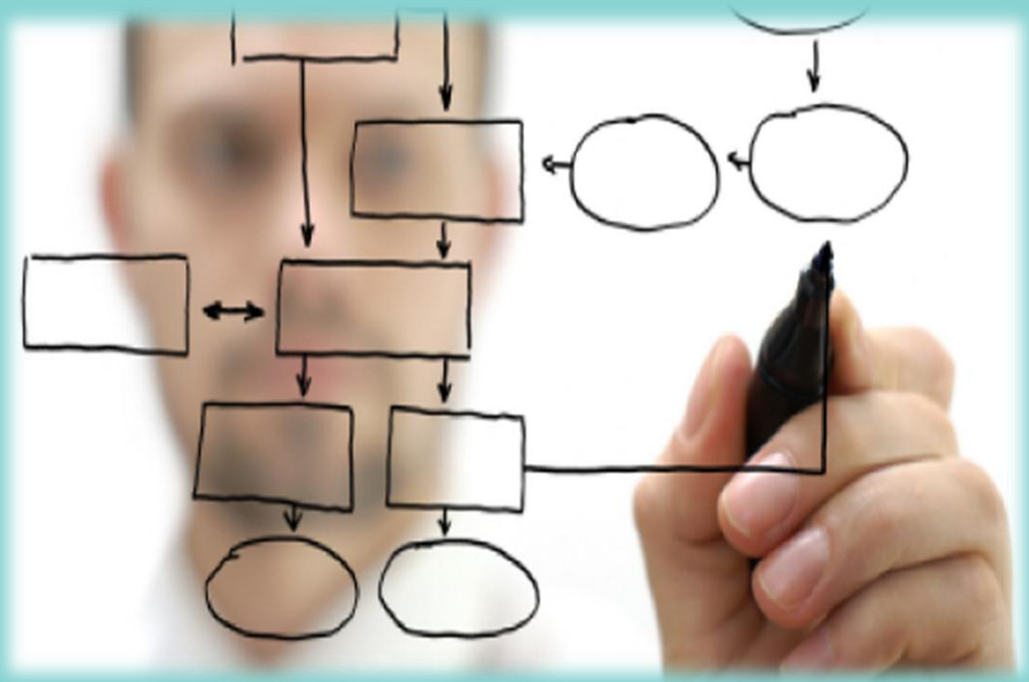
1. **Captain**, who possesses behaviors and skills described in self-management team behavior.

2. **Chief engineer**, who possesses behaviors in decision-making team behavior.

3. **Human resources person**, who possesses behaviors described in collaboration team behavior.

4. **Spokesperson**, who possess behaviors described in communication team behavior

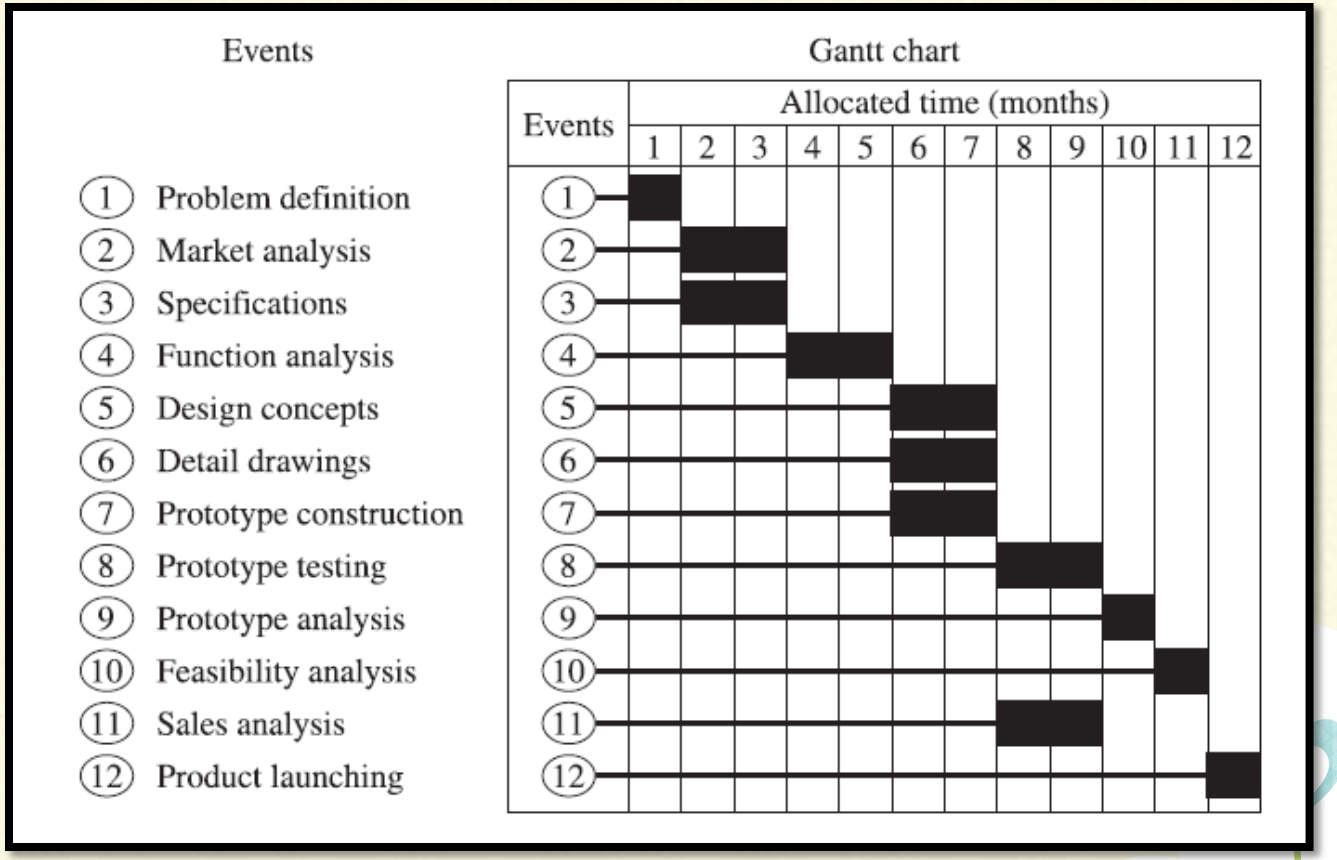
SCHEDULING



The Gantt Chart

The Gantt chart is in the form of a bar chart and is established as follows:

1. List all events or milestones of the project in an ordered list.
2. Estimate the time required to establish each event.
3. List the starting time and end time for each event.
4. Represent the information in a bar chart.



The CPM (Critical Path Method) / PERT (Program Evaluation And Review Technique)

A CPM/PERT project generally has the following characteristics:

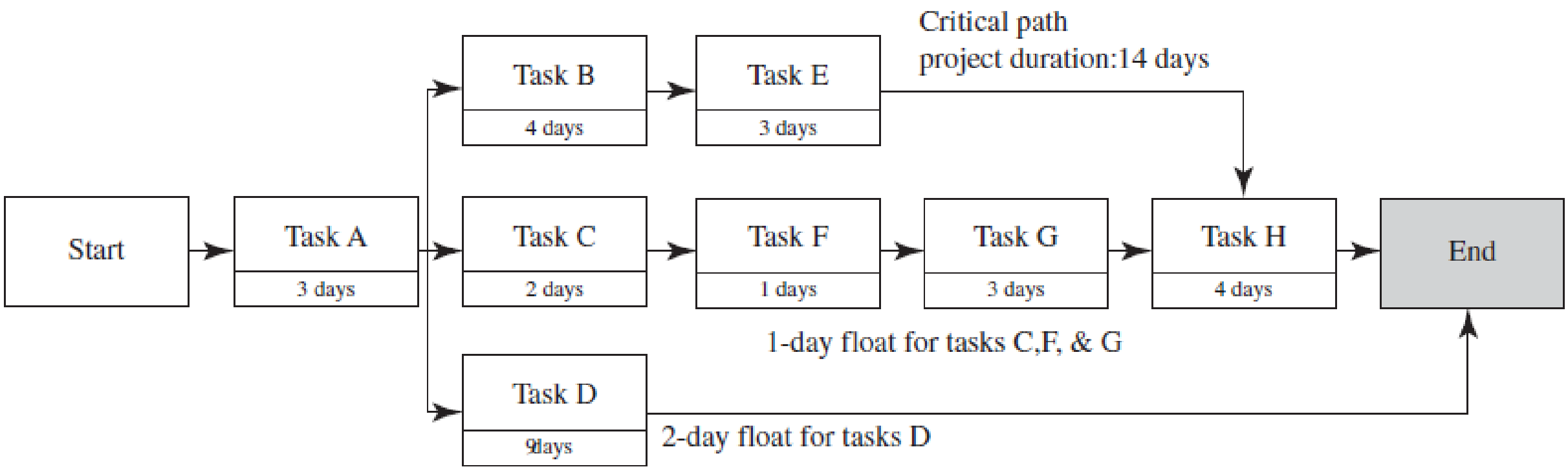
1. There are clearly defined activities or jobs whose accomplishment results in project completion.
2. Once started, the activity or job continues without interruption.
3. The activities or tasks are independent, which means they may be started, stopped, and performed individually in a prescribed sequence.
4. The activities or jobs are ordered and they follow each other in a specified manner.

CPM / PERT

Several symbols, terms, and definitions are used in developing the CPM/PERT networks:

- **Event (node)** : This represents a point in time in the life of a project. An event can be the beginning or the end of an activity. A circle is used to represent an event. Generally, each network event is identified with a number.
- **Activity** : This is an effort needed to carry out a certain portion of the project.
- **Network paths** : These are the paths used (or needed) for reaching the project termination point, or the event from the project starting point or event.
- **Critical path** : This is the longest path with respect to time duration through the PERT/CPM network. In other words, the critical path creates the largest sum of activity duration of all individual network paths.
- **Earliest event time (EET)** : This is the earliest time at which an event occurs, providing all proceeding activities are accomplished within their estimated times.
- **Latest event time (LET)** : This is the latest time at which an event could be reached without delaying the predicted project completion date.
- **Total float** : This is the latest time of an event, minus the earliest time of the preceding event, and the duration time of the in-between activity.

CPM / PERT


Critical path
project duration:14 days
Start
Task A
3 days
Task B
4 days
Task E
3 days
Task C
2 days
Task F
1 days
Task G
3 days
Task H
4 days
End
1-day float for tasks C,F, & G
Task D
9days
2-day float for tasks D

RESEARCH SKILL

What should we do ?

- **Research** is *the ability to collect data, gather the information, and interpret it as knowledge.*
- The ability to research allows a person to stay up-to-date with the latest in technology and the marketplace
- **Data** can be defined as raw, unprocessed material, which can be collected either through laboratory testing or many other sources. Once this data is processed into something meaningful, this becomes **information**. However, it only becomes **knowledge** when one is able to apply this information successfully.

Research Stages

Step 1 : Defines the task and identifies what data and/or information needs to be collected or gathered

Step 2 : Plan how you will go about seeking or collecting the information required.

Step 3 : Identifies the sources and collect all the data and process it into information relevant to your task.

Step 4 : Extracts the information that is needed

Step 5 : Processes and presents this information into the final knowledge

Step 6 : Evaluate to ensure that the knowledge and the process is accurate and complete.

TECHNICAL WRITING


Plan the writing
Outline the report
Write
Edit
Rewrite
POWER

The Attributes Of Good Writing

1. Write as objectively as possible. Do not become emotionally involved or attached to a problem or a solution.
2. Be reasonably methodical.
3. Record whatever is learned, and keep in mind that whatever work is performed must eventually be documented.
4. Always strive for clarity in writing, and keep in mind that the written material should be simple and straightforward.
5. Deliver the written material on time.

Effective Visuals (Illustrations)

1. Reference all illustrations in the text.
2. Reference the data source.
3. Carefully plan the placement of illustrations.
4. Specify all units of measure and the scale used in the drawing.
5. Label each illustration with an identifying caption and title. Include the figure source if the figure was obtained from another document.
6. Spell words out rather than use abbreviations.
7. When a document has five or more figures, include a list of figures at the beginning of the report.
8. Avoid putting too much data in an illustration.

PRESENTATION STYLE

What should we do ?

- Every presentation should have an objective. The speaker's main objective is to deliver the message (objective) to the audience. The objectives may vary from one presentation to another. To identify the real objective, ask the following question:

  "If everything goes perfectly, what do I intend to achieve?"

- Realize who your audience is and what their educational level may be.

Remember this !

- Only 70% of the spoken word is actually received and understood. Complete understanding can come through repetition and redundancy in speech.
- People mostly understand three-dimensional objects. Two-dimensional projections need to be transmitted with added details.
- People usually perceive problems from their own perspectives.
- Convey ideas so that they may be interpreted with the least expenditure of energy.

Presentation Skill

1. Know your audience thoroughly.
2. Never read solely from notes, a sheet, or directly from an overhead projector. You can use your notes for reference, but remember to make eye contact with your audience from time to time.
3. Bring the audience up to the speed in the first few moments.
4. Stay within the time allotted.
5. Include relevant humorous stories, anecdotes, or jokes (only if you are good at it).
6. Avoid using specialized technical jargon. Explain the terms you feel the audience may not know.
7. Understand your message clearly. The entire goal is to communicate the message clearly.
8. Practice, practice, practice! You may like to memorize the introduction and concluding remarks.
9. The dry run is a dress rehearsal. Use it to iron out problems in delivery, organization, and timing.
10. Avoid mannerisms: Speak confidently but not aggressively.
11. Maintain eye contact with audience members, and keep shifting that contact through the talk.
12. Never talk to the board or to empty space.
13. Present the material in a clever fashion, but not in a cheap and sensational fashion. Be genuinely sincere and professional.
14. A logical presentation is much more critical in an oral one than it is in a written one.

Effective Oral Presentation

1. Visual aids (sketches, graphs, drawings, photos, models, slides, transparencies, and the Web) often convey information more efficiently and effectively. Visual aids permit the use of both the hearing and seeing senses, and they help the speaker.
2. Limit slides to not more than one per minute.
3. Each slide should contain one idea.
4. The first slide should show the title of your presentation and the names of the collaborators.
5. The second slide should give a brief outline of the presentation.
6. The last slide should summarize the message you just delivered.
7. If you need to show a slide more than once, use a second copy.
8. Avoid leaving a slide on the screen if you have finished discussion on the topic.
9. Never read directly from the slide. Spoken words should complement the slides.
10. Prepare notes for each slide and use them during practice.
11. Use graphs to explain variations. Clearly label the axis, data, and title. Acknowledge the source.
12. Every graph should have a message (idea). Color should enhance the communication, not distract from it.
13. Audiences respond to well-organized information. That means : a. Efficient presentation, b. All assumptions clearly stated and justified, c. Sources of information and facts clearly outlined
14. Begin with the presentation of the problem and conclusion/recommendation (primary goal).
15. Finish ahead of schedule and be prepared for the question/answer session.

Question Time

- Allow the questioner to complete the question before answering.
- Avoid being argumentative.
- Do not let the questioner feel that the question is stupid.
- Adjourn the meeting if the questions slack off.
- Thank the audience one final time after the Q/A session.


KEEP
CALM
AND
STUDY
HARD