L1.

1. Problem definition

- **Symptom:** visible, immediately observable event that occurs in a business, e.g., sales have declined.
- **Problem:** the underlying cause (reason) for the symptom we observed, e.g., the cause/reason for sales being observed as declining (such as inferior product).
- **Iceberg principle**: states that In many business problem situation the decision maker is aware of only 10% of the true problem. Most of the time which is thought to be the problem is nothing more than an observable problem symptom, while 90% of the problem is neither visible nor clearly understood by decision makers

➢ **Management decision problem (MDP):**

- Is the problem confronting the decision maker.
- Asks what the decision maker needs to do in order to address the observed symptoms.
- *ACTION* orientated
- Focuses on *Symptoms*
    - E.g. Should a new product be introduced?

➢ **Business research problem (BRP):**

- Establishes what information is needed to answer the MDP
- Asks how that information can be obtained to identify and address the underlying causes.
- *INFORMATION* orientated
- Focuses on *the underlying causes*
    - E.g. What are consumer preferences for the proposed new product?

➢ **Specification of research objectives (MRO)**

- Specification of what the project should measure
- Clearly defines the information needed to solve the problem and make the business decision.
- Formalizes the question as a statement, must be specific, precise and measurable
- e.g. To identify, To measure, To observe, To rank, To compare, To establish, To rate.

- - **MDP** 'Should a new product be introduced?'
- - **BRP** 'What are consumer preferences for the proposed new product?'
- - **Project Objectives** 'To determine what characteristics of the new product are preferred by customers' and 'To determine whether consumers would purchase the proposed new product'

2. The process of defining the problem

1) Discussions with decision maker
2) Interview with experts
3) Secondary data analysis
4) Perform qualitative research

3. The difference between primary and secondary data

- **Primary** Data: Originated by a researcher for the specific purpose of addressing the problem at hand.
- **Secondary** Data: An individual or organization collated data for their own purpose and this data is then provided to, and used by, another individual or organization. Therefore collected for some purpose other than directly for the problem at hand. Sources includes internal (sale figure, invoices and company income statement) and external (journals, databases, publish).

➢ **Criteria for evaluating secondary data**

- Specifications: Methodology used to collect the data
- Error: Accuracy of the data
- Currency: When the data were collected
- Objective(s): The Purpose for which the data were collected
- Nature: The content of the data
- Dependability: Overall, How dependable are the data

	Primary Data	Secondary Data
Collection Purpose	For the problem at hand	For other problems For helping to generate ideas and objectives
Collection Process	Very Involved	Rapid and Easy
Collection Cost	Relatively High	Relatively Low
Collection Time	Relatively Long	Relatively Short

4. Research design

- Tree type of research

- **Exploratory Research**
  - To ***understand***...develop hypotheses...*why*?
    - e.g. *What is the cause of customer dissatisfaction?*
  - Observation, interviews, focus groups
- **Descriptive Research**
  - To measure the state...*what is...*?
    - e.g. ***describe*** market characteristics or functions
  - Surveys, observation
- **Causal Research**
  - To *test* hypotheses
    - e.g. establishing ***cause & effect***
  - Experiments

	Exploratory	Descriptive	Causal
Objective:	Discovery of ideas and insights	Describe market characteristics or functions	Determine cause-and-effect relationships
Characteristics:	Flexible and versatile Often front end of total research design	Pre-planned and structured design Marked by prior formulation of specific hypotheses	Manipulation of one or more independent variables Control of other mediating variables
Methods:	Expert surveys Pilot surveys Secondary data Qualitative research (e.g. interviews, focus groups)	Secondary data Surveys Panels Observation and other data	Experiments

	Qualitative Research	Quantitative Research
Objective	*Exploratory* - To gain insights and understanding of the underlying reasons and motivations	*Conclusive* - To quantify and generalise the to the population of interest
Questions	'How' and 'Why' (Words)	'What' (Usually **numbers**, though can include words)
Sample	Small / unrepresentative	Large / representative
Data Collection	Usually unstructured (can include structured/mechanical)	Structured
Data Analysis	Content Analysis (including counting)	Statistical
Purpose/Outcome	Develop an initial understanding	Recommend a final course of action
Example	Focus Groups, Depth Interviews, Projective Techniques	Surveys, Questionnaires, Observation

L2.

1. In-depth interview

- Usually unstructured or semi-structured in nature, 30 minutes to 1 hour.
- Commonly use open-ended questions with probing follow-up questions, to uncover underlying motivations, beliefs, attitudes and feelings

- When use interview (advantages)
  - ✓ Discussion is related to confidential, sensitive or embarrassing topic.
  - ✓ Situations where free exchange of information is required with no social pressure to conform to group responses.
  - ✓ Discussions with professional people.