# Data Dictionary

Mr. GD Makkar
HOD, Dept. of CA & IT
SGRRITS
Dehradun



Data dictionary or data repository is a catalogue of various elements in a system. The elements are data flow, data store, and processes. An analyst uses the data dictionary to collect, document, and organize specific facts about the system.

Data dictionary is developed during the data flow analysis and requires throughout the system development life cycle and helps the analysts in determining system requirement.

## Reasons for using Data Dictionary

- To maintain the details
- Communicate meaning
- Document system features
- Locate errors and omissions

## Type of data stored in Data Dictionary

Data dictionary stores two types of descriptions for the data flowing through the system:

1. Data Element
2. Data Structure



**Data Element** is field, data item or elementary item, smallest unit that has meaning. E.g.: Employee Name, Date of joining. These data elements are grouped together to make up the employee file that is meaningful to the user.

**Data Structure** is a set of elements that are related to each other and collectively describe a component in the system. E.g.: Employee Register, consist of Employee Name, Date of joining. DOB, Department, Grade, Salary etc.

***Both data flow and data store are Data Structure. If Data Structures are moving, they are called* data flow*, when Data Structures are at rest and are not moving they are data store.***

Data dictionary store every data element, data store, data flow and processes in detail.

## FORM FOR RECORDING DATA ELEMENT

Date –of –Join **DATA ELEMENT**

**Short Description** this element describes the data when the employee joined the organization **TYPE**: A AN N D

**Aliases (contexts)** 1

| **IF Discrete** | | **IF Continuous** |
|---|---|---|
| **Value** | **Meaning** | **Range of values** |
| | | **Typical value** 1/09/02 |
| | | **Length** 8 |
| | | **Internal Representation** Mm/DD/YY |

**Other editing information** The data type can be changed to other formats like dd/mm/yy etc.

**Related Data Structure / elements**



## FORM FOR RECORDING DATA FLOW

**DATA FLOW** New Employee details

Description:

**Source ref: Description**: Employee

**Destination ref: Description**: Employee Register

**Expanded Description**: Employee Details like: Name, Date-of-joining, Dept., Grade, salary, Bank details are entered into the Employee Register.

**Included Data Structures:**

Employee Register

**Volume Information**

Volume Increase as and when employee joins. Does not decrease when Employee exists, as record is not deleted. (Exit flag is inserted.)

## FORM FOR RECORDING DATA STORE

**DATA STORE REF.** Transaction List

**Description:** Month's Transaction details

| **Data Flows in:** | **Data Flows out:** |
|---|---|
| Overtime, attendance and Advance Salary details | Consolidated transaction of the months |

**Contents:**
Employee number,

**Physical Organization**: Sales Department



## FORM FOR RECORDING PROCESS

**PROCESS NAME:** Maintain Master Employee Pay Details

**Description**: _____

| Inputs | Logical Summary | Output |
|---|---|---|
| New Employee Details<br>Bank Details | For New Employee, all required details need to be entered.<br>A new record is written. | Updated Employee master File |
| Current Employee details to be updated | For old Employees, Details to be changed Are updated | |

**Physical Ref:**
**Full details of this logic can be found in:** Location where entire logic is Explain in detail