

SUMMARY of Module 12

1. Data may be input to a computer off-line or on-line. In on-line entry a user enters data interactively via a video terminal connected to the computer. In off-line data entry data filled in forms are entered by operators in a separate PC or a data entry machine.
2. Off-line data entry is suitable if the number of records is very large.
3. In off-line data entry, batches of data are formed and entered. They are checked by a validation program and the corrected records are stored in a file.
4. To reduce errors in input, it is essential to carefully design the forms used for entering data.
5. Important data elements are coded. Codes are necessary for unique identification, easily cross-referencing and efficient storage and retrieval.
6. There are many methods for coding. An ideal code must be concise, expandable, meaningful, comprehensive and precise. It is not possible to incorporate all these ideal features in a code.
7. Codes are classified as: (i) Serial number codes, (ii) Block codes, (iii) Group classification codes, and (iv) Significant codes. Group classification codes and Significant codes are most meaningful, expandable, precise and comprehensive. They are, however, not concise, Serial and Block number codes are more concise. They are also precise and expandable but are not meaningful and comprehensive.
8. Any error made in entering important data fields such as account codes and identification codes must be detected during data entry.
9. The most common errors made during data entry are: a single digit is incorrectly

entered or any two digits in the code are interchanged. These errors are called respectively single transcription and transposition errors and account for 96% of all data entry errors.

10. Given a code, the digits in it starting from the last digit are multiplied by weights 2, 3, 4, etc., and the products are added. The sum is divided by 11. The remainder is subtracted from 11. This number (which is called a check digit) is appended as the last digit of the code. The code constructed in this way is called a modulus-11 check digit code.
11. After data entry the digits in the code starting from the last digit are multiplied by weights 1, 2, 3, 4, etc., and the products are added. The sum is divided by 11. If the remainder is not zero then there is an error in the code.
12. Modulus-11 check digit code guarantees detection of all single transcription and transposition errors. It also detects 95% of all other errors.
13. It is essential to design good data validation programs to prevent data entry errors from corrupting files of input data. Validation programs need information for detecting errors. This information is provided by controls exercised during data preparation.
14. Important control mechanisms are; giving unique sequence numbers to each data record, providing a batch control record containing a count of number of records and a total of one of the fields..
15. The same data is entered by two different persons and compared to reduce transcription errors.
16. Besides this, individual data fields are checked using information on their range of

allowed values, range of reasonable values, and relationships between different fields. Batch control provides information to detect incorrect values entered, missing records, and data in the wrong sequence.

17. With the advent of Personal Computers, remote terminals connected to a computer and local computer networks, considerable amount of data is entered in files interactively.
18. For interactive data input, special screens are designed on video terminals for easy data entry. Errors in data entry are instantly detected by a validation program during data entry and can be immediately corrected.
19. Common methods of interactive data input is by use of menus, templates and interactive commands for data entry.
20. A menu method is used to pick one out of many alternatives, a template method to enter new data, and a command method to add and delete data.
21. These methods are combined to provide a user the most appropriate technique for a particular type of interactive data entry.