

Vidush Somany Institute of Technology & Research, Kadi

CE / CSE / IT (3rd Semester)

Subject – Data Structures and Algorithms (CT303-N)

Assignment-5

- 1) Explain collision resolution techniques with example.
- 2) List out different hash methods/functions and explain each in detail.
- 3) What is hashing? What are the qualities of a good hash function? Explain internal & external hashing with example.
- 4) List out applications of hashing.
- 5) Explain significance of data structure.
- 6) Build a chained hash table of 10 memory locations. Insert the keys 131, 3, 4, 21, 61, 24, 7, 97, 8, 9 in hash table using chaining. Use $h(k) = k \bmod m$. ($m=10$)
- 7) Consider the hash table of size 10. Using quadratic probing, insert the keys 72, 27, 36, 24, 63, 81, and 101 into hash table. Take $c_1=1$ and $c_2=3$.
- 8) Explain the concept of user-defined data types with an example in a programming language.
- 9) What is a linked list, and how does it differ from an array?
- 10) What is a stack, and how does it differ from an array?