1. Manish has to travel back to this home every day from college. For, that he can use 2 paths, path A and path B. He can use any path, but he has to go for 10 days, every day construct a CFG for the language of L= an b2n ,where n>=1, that is If he takes the path A on day one , he has to go by path B for the next two days.

For the above scenario, take some example route and perform left most and right most derivation, check whether the constructed grammar in ambiguous or not.

1. Construct a grammar for the desktop calculator App to perform addition, subtraction, multiplication and division operation restricted to the integers restricted to the integers {2,3,4} and check whether the grammar is ambiguous or not using Parse tree.
2. Construct a grammar representing syntactic structure {{IF, THEN}, {IF, THEN, ELSE}, {IF, THEN, ELSE, IF}} statements in C programming. Consider an example and check whether the constructed grammar is ambiguous or not.