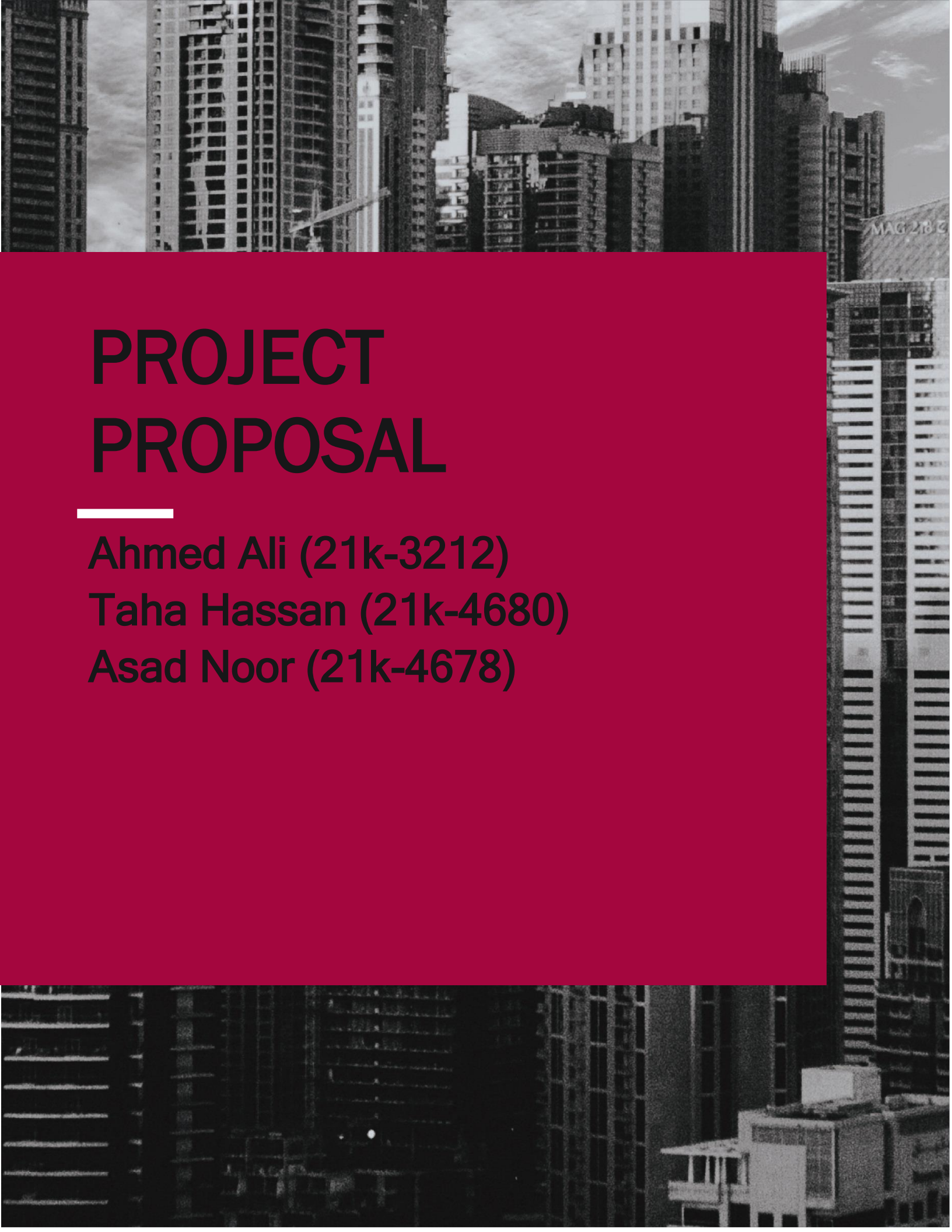

# PROJECT PROPOSAL

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# Parallel Programming in Android/iOS Mobile app - Comparison of sorting-algorithms using threads (3 Sorting algorithms)

## INTRODUCTION:

We will apply the technique of parallel programming in android/iOS application to compare sorting algorithms (3) using threads. In the world of mobile computing, the need for efficient algorithms is paramount. Sorting algorithms are one of the fundamental building blocks in programming and are extensively used in mobile applications to sort and arrange data.

## PROPOSED SOLUTIONS:

- Efficient algorithms are important in mobile computing
- Sorting algorithms are widely used in mobile applications
- Performance of sorting algorithms affects user experience
- Parallel programming can improve sorting performance
- Project aims to implement and compare Bubble Sort, Insertion Sort, and Selection Sort using threads in mobile applications
- Goal is to evaluate the effectiveness of parallel programming in optimizing sorting performance.

## IMPLEMENTATIONS:

- Generate an array of random integers to be sorted
- Create three sorting functions: Bubble Sort, Insertion Sort, and Selection Sort
- Implement each sorting function using threads with the pthread library
- Measure the time taken to sort the array for each algorithm
- Display the sorted array and the time taken for each algorithm
- Analyze and compare the time taken and efficiency of each algorithm
- Display additional information such as number of threads used, CPU usage, and memory usage for each algorithm
- Developers can use the comparison to choose the most efficient sorting algorithm for their mobile application.

## TOOLS:

- Linux based operating system
- Android api`s