# CHAPTER 4

# CONCLUSION AND RECOMMENDATIONS

## CONCLUSION

Every year universities schedule lectures for their students and lecturers, and this task is not easy because it takes a lot of time and effort to find an acceptable schedule that meets the needs of lecturers and students at the same time while maintaining a schedule free of conflicts. This project was implemented to find the best solution to the scheduling problem while automating most of the work that is done manually, with the help of the artificial intelligence algorithm known as **Tabu Search**, firstly the project enables to create a schedule that meets the needs and requests of individuals associated with the university, and secondly the project can improve the created schedule with the help of the algorithm which results in reducing the time and effort spent. This project is implemented as a web application program with a friendly user interface that allows users to define schedule properties, and the application is associated with a server that creates the schedule.

The desired objectives of the project have been achieved. However, there are some limitations. We can give some recommendations to improve this system.

## RECOMMENDATIONS

It’s recommended to do some additions to the system to make the outcomes of the project used for general purposes and more accuracy:

* Instead of initializing the algorithm with a random generated timetable, use a constructive heuristic which is a systematic method for building a feasible solution from scratch.
* Implementing granularity to the algorithm allowing more detail or precision in generating the timetable.
* Adding the ability for the project to be able to make the schedule of the exams of the university.