7. CONCLUSION

7.1 Summary

A lot of attempts were developed to find a solution for the high turnaround time, high waiting time and the overhead of extra context switches in Simple Round Robin Algorithm, regardless of the different methodologies used in these attempts; however all of them rely based on the fixed-time quantum. The proposed algorithm called Performance analysis of Round Robin Scheduling using adaptive approach based on smart time slice is designed to solve the drawbacks of Simple Round Robin Scheduling Algorithm in a practical, simple and applicable manner. The above comparisons show that the proposed algorithm provides much better results twice or three times and in some cases perhaps more than other approaches based on fixed time quantum in all scheduling criteria. After mathematical analysis of this algorithm showed through a simulation program which is prepared for this purpose that this algorithm works in a stable manner regardless of the number of the new running processes, taking into consideration the terminated and the new arrival processes. It is recommended to use the shortest burst time concept with smart time slice; because it will give the operating system the ability to adapt to the user behavior and not vice versa, which may lead us to rethink building an intelligent, learnable and adaptable operating system. The Adaptive Round Robin Algorithm is designed to meet all scheduling criteria such as maximum CPU utilization, minimum average waiting time, minimum average turnaround time and fewer contexts switches. According to the result of this algorithm all the CPU scheduling criteria is perfect found to the comparison of Simple Round Robin Scheduling Algorithm. The Adaptive RR algorithm uses fixed time quantum for computing the new