CHAPTER V
CONCLUSIONS

5.1 Conclusion

From the results of this final project can be concluded:

1. The cutting force control system using Arduino Uno based on fuzzy logic to optimize the feed rate on the lathe has been successfully created. It can control the cutting force automatically and more accurately than common control because every change in cutting force is calculated using linear sets and equations.

2. The control system can maintain the cutting force at a set point of 2.55 N.

3. If the cutting force exceeds the set point, the cutting force will be reduced by reducing the feed rate and increasing the delay step.

4. The control system can be said to be successful, because all the experimental results show the input graph has the same form of decreasing and increasing relative to the output.

5.2 Recommendations

1. To get more precise control results, it is better to use a more sensitive sensor and a better microcontroller

2. Turning should also be done on other workpiece materials

3. The value of the set point should be determined based on several trials (trial and error) to obtain the most optimum value in optimizing the machining process