

**Birla Institute of Technology and Science Pilani**  
**CS F342 Computer Architecture**  
**Second Semester 2020-21**  
**Lab Sheet- 5 (23<sup>rd</sup> March 2021)**

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**System Level Design**

Implement a 8 bit multiplier using a four bit multipliers and a suitable adder.

1. Use necessary hardware to finish the job in a **single clock cycle**.
2. Use only a single multiplier and a single adder **multi-cycle implementation**.
3. Use **Pipelined** approach for this problem.

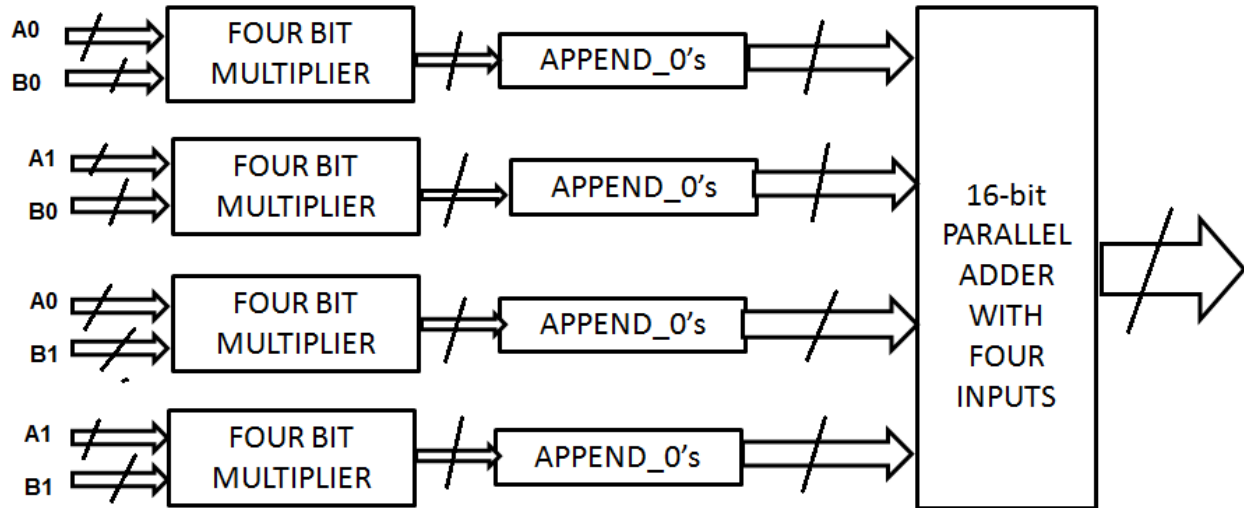


Figure 1 Single Cycle Implementation

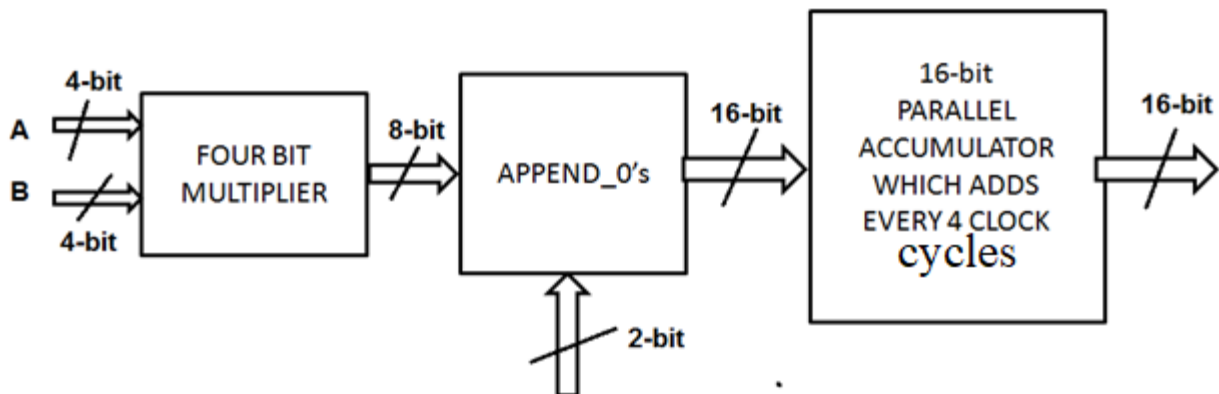


Figure 2 Multi-Cycle Implementation

\*\*\* The End \*\*\*

Submission Link: <https://forms.gle/yDTRZsWGa85oqSjv7>