OS Home Assignment 1

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**Answer 1.**

Parent sees i = 0

Parent sees i = 1

Child sees i = 1

Parent sees i = 2

Child sees i = 2

Child sees i = 0

We can schedule the child process before the parent process by using vfork() to create the child process.

Output using vfork()

Child Sees i=0

Parent Sees i=0

Child Sees i=1

Parent Sees i=1

Child Sees i=2

Parent Sees i=2

**Answer 2.**

Parent says a: 1

id: 1 a: 2 b: 1

id: 2 a: 3 b: 1

Thread 1 and 2 complete

**Answer 3.**

Advantages of user level threads mapped to kernel level threads

Scheduling can be application specific which provides flexibility.

Lower overhead thread operations since no system calls. The Context Switching becomes fast as the system calls are avoided.

1. m>>n   
   No kernel mode privileges are required for thread switching.  
   No overhead so the best option.
2. m>n   
   Reasonable Choice
3. m=n   
   Do not support multithreading as one process will run on one processor.
4. m<n   
   Reasonable Choice
5. m<<n   
   Bad Choice