CS 24000 - Programming In C

Week 13: Continue Week 11 slides
Quiz 9

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Quiz 9 #1

```
#include <unistd.h>
/* etc */
int global_v=0;
// suppose fork() succeeds
 int main( )
{
   pid_t child_PID;
   int local_v = 0;
   child_PID = fork();
```

```
if(child_PID == 0) {
   printf("%d     \t%d\n", global_v, local_v);

else {
         global_v = 1;
         local_v = 1;
}
   return 0;
}
```

- What numbers will be printed to the stdout?
- (a) 0   0
- (b) 0   1
- (c) 1   1
- (d) Depends on the timing
- (e) None of the above

- Answer (a) 0   0

Quiz 9 #2

```
#include <unistd.h>
/* etc */
// suppose fork() succeeds
 int main( )
{
 pid_t child_PID;
child_PID = fork();
if(child_PID == 0)
        while (1) {}
else {
}
    return 0;
}
```

- Which of the following claims is true?
- (a) both processes will be unable to stop because there is an infinite loop
- (b) the parent process will terminate, but not the child process
- (c) both process will terminate because the parent process terminates
- (d) none of the above

Answer

- (b) the parent process will terminate, but not the child process

Quiz 9 #3

```
#include ……. // omitted
// suppose fork() succeeds
int main( ) {
{  int i;
   pid_t child_PID;
   FILE *fp;
   fp = fopen(“somefile”, w+);
            // assume open suceeds
   child_PID = fork();
if(child_PID == 0) {
   rewind(fp);
   fscanf(fp, “%d”, &i);
else {
        for (i=0;i<10000000; i++)
          fprintf(fp, “%d”, i);
}
   return 0;
}
```

- Which of the following claims is correct?
- (a) the fscanf() call is guaranteed to read the first number in “somefile” written by the parent process
- (b) the fscanf() call is guaranteed to read the last number in “somefile” written by the parent process
- (c) the fscanf() call is guaranteed to find it reaches the end of “somefile”
- (d) it all depends on how both processes are scheduled and interrupted

Answer

- (d) It depends on the scheduling and interrupts