Question 1

- Assume that the fork() function is always successful
- Please show the output

```
#include<sys/types.h>
#include<stdio.h>
#include<unistd.h>
int main()
{
        pid_t pid, pid2;
        pid = fork();
        if (pid == 0)
        {
                printf("AAA");
                pid2 = fork();
                if (pid2 != 0)
                {
                        wait(NULL);
                        printf("BBB");
                }
                else
                {
                        printf("CCC");
                }
        }
        else
        {
                wait(NULL);
                printf("DDD");
        }
        return 0;
}
```


Question 2

- Assume that the fork() function is always successful
- Please show the output

```
#include<sys/types.h>
#include<stdio.h>
#include<unistd.h>
int main()
{
        pid_t pid, pid2;
        printf("Statement 1 !\n");
        pid = fork();
        if (pid > 0)
        {
                wait(NULL);
        }
        else
        {
                pid2 = fork();
                if (pid2 == 0)
                {
                        printf("Statement 2 !\n");
                }
                else
                {
                        wait(NULL);
                        printf("Statement 3 !\n");
                }
                 printf("Statement 4 !\n");
        }
        printf("Statement 5 !\n");
        return 0;
}
```


Answer

- A1

  AAACCCAAABBBDDD

  or

  AAACCCBBBDDD

- A2
  - Statement 1 !
  - Statement 2 !
  - Statement 4 !
  - Statement 5 !
  - Statement 3 !
  - Statement 4 !
  - Statement 5 !
  - Statement 5 !