2-1

a. 4 processes are created including the program itself.

b. There are 8 processes after adding a third fork.

c. The number of processes is equal to 2^n, where n is the number of fork() statements.

d.

```
bash(3922)──────ProcessCreation(3991)──┬──ProcessCreation(3992)──┬──ProcessCreation(3995)──────ProcessCreation(3998)
                                       │                         └──ProcessCreation(3996)
                                       ├──ProcessCreation(3993)──────ProcessCreation(3997)
                                       └──ProcessCreation(3994)


bash(4257)──────ProcessCreation(4608)──┬──ProcessCreation(4609)──┬──ProcessCreation(4613)──────ProcessCreation(4615)
                                       │                         └──ProcessCreation(4614)
                                       ├──ProcessCreation(4610)──────ProcessCreation(4612)
                                       └──ProcessCreation(4611)


bash(4257)──────ProcessCreation(4708)──┬──ProcessCreation(4709)──┬──ProcessCreation(4711)──┬──ProcessCreation(4733)──┬──ProcessCreation(4737)──────ProcessCreation(4739)
                                       │                         │                         │                        └──ProcessCreation(4738)
                                       │                         │                         ├──ProcessCreation(4734)──────ProcessCreation(4736)
                                       │                         │                         └──ProcessCreation(4735)
                                       │                         ├──ProcessCreation(4713)──┬──ProcessCreation(4724)──────ProcessCreation(4731)
                                       │                         │                         └──ProcessCreation(4728)
                                       │                         ├──ProcessCreation(4715)──────ProcessCreation(4730)
                                       │                         └──ProcessCreation(4717)
                                       ├──ProcessCreation(4710)──┬──ProcessCreation(4721)──┬──ProcessCreation(4727)──────ProcessCreation(4732)
                                       │                         │                         └──ProcessCreation(4729)
                                       │                         ├──ProcessCreation(4722)──────ProcessCreation(4725)
                                       │                         └──ProcessCreation(4723)
                                       ├──ProcessCreation(4712)──┬──ProcessCreation(4719)──────ProcessCreation(4726)
                                       │                         └──ProcessCreation(4720)
                                       ├──ProcessCreation(4714)──────ProcessCreation(4718)
                                       └──ProcessCreation(4716)
```