# Solution M2 (@VasAtanasov)

### Virtual Machine #1

**CHECK:** [*https://courses.zahariev.pro/check.php?20250314083542kDW3Kv5Qga*](https://courses.zahariev.pro/check.php?20250314083542kDW3Kv5Qga)

1. Create two users (**developer** and **manager**) with full names like **ProjectX Developer** and **ProjectX Manager** or similar format. Then set their passwords to whatever you like, for example **Password2** and **Password3**

1. sudo useradd -c "ProjectX Developer" developer

2. sudo passwd developer

3. sudo useradd -c "ProjectX Manager" manager

4. sudo passwd manager

1. Create a new user group with ID 3000, named projectxyz

1. sudo groupadd -g 3000 projectxyz

1. Make both users (developer and manager) members of the projectxyz group

1. sudo usermod -a -G projectxyz developer

2. sudo usermod -a -G projectxyz manager

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1. vasil@debian:~$ sudo useradd -c "ProjectX Developer" developer

2. [sudo] password for vasil:

3. vasil@debian:~$ sudo passwd developer

4. New password:

5. Retype new password:

6. passwd: password updated successfully

7. vasil@debian:~$ sudo useradd -c "ProjectX Manager" manager

8. vasil@debian:~$ sudo passwd manager

9. New password:

10. Retype new password:

11. passwd: password updated successfully

12. vasil@debian:~$ sudo groupadd -g 3000 projectxyz

13. vasil@debian:~$ sudo usermod -a -G projectxyz developer

14. vasil@debian:~$ sudo usermod -a -G projectxyz manager

15. vasil@debian:~$ wget -q https://courses.zahariev.pro/m2.sh -O - | sudo bash

16. \* Working on Debian-based machine (BIOS) using wget to report

17. \* Testing for the developer and manager users ...

18. ... PASS

19. \* Testing for the projectxyz group ...

20. ... PASS

21. \* Testing for the projectxyz group members (developer and manager) ...

22. ... PASS

1. Create a folder /shared/projects

1. sudo mkdir -p /shared/projects

1. Create series of folders under **/shared/projects** with the following structure:
   * **projectXYZ**
     + **Stage1**
       - **DOCUMENTS**
       - **BUDGET**
     + **Stage2**
       - **DOCUMENTS**
       - **BUDGET**
     + **Stage3**
       - **DOCUMENTS**
       - **BUDGET**

1. sudo mkdir -p /shared/projects/projectXYZ/Stage{1..3}/{DOCUMENTS,BUDGET}

1. Create at least **5** files **document1.doc** through **document5.doc** in every **DOCUMENTS** folder

1. sudo touch /shared/projects/projectXYZ/Stage{1..3}/DOCUMENTS/document{1..5}.doc

1. Create **readme\_en.txt**, **readme\_bg.txt**, and **readme\_de.txt** files in every **BUDGET** folder

1. sudo touch /shared/projects/projectXYZ/Stage{1..3}/BUDGET/readme\_{en,bg,de}.txt

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A screenshot of a computer

AI-generated content may be incorrect.

1. vasil@debian:~$ sudo mkdir -p /shared/projects

2. vasil@debian:~$ sudo mkdir -p /shared/projects/projectXYZ/Stage{1..3}/{DOCUMENTS,BUDGET}

3. vasil@debian:~$ sudo touch /shared/projects/projectXYZ/Stage{1..3}/DOCUMENTS/document{1..5}.doc

4. vasil@debian:~$ sudo touch /shared/projects/projectXYZ/Stage{1..3}/BUDGET/readme\_{en,bg,de}.txt

5. vasil@debian:~$ ls -al /shared/projects/

6. total 12

7. drwxr-xr-x 3 root root 4096 Mar 14 10:00 .

8. drwxr-xr-x 3 root root 4096 Mar 14 09:59 ..

9. drwxr-xr-x 5 root root 4096 Mar 14 10:00 projectXYZ

10. vasil@debian:~$ ls -aHl /shared/projects/projectXYZ/Stage{1..3}/{DOCUMENTS,BUDGET}

11. /shared/projects/projectXYZ/Stage1/BUDGET:

12. total 8

13. drwxr-xr-x 2 root root 4096 Mar 14 10:00 .

14. drwxr-xr-x 4 root root 4096 Mar 14 10:00 ..

15. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_bg.txt

16. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_de.txt

17. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_en.txt

18.

19. /shared/projects/projectXYZ/Stage1/DOCUMENTS:

20. total 8

21. drwxr-xr-x 2 root root 4096 Mar 14 10:00 .

22. drwxr-xr-x 4 root root 4096 Mar 14 10:00 ..

23. -rw-r--r-- 1 root root 0 Mar 14 10:00 document1.doc

24. -rw-r--r-- 1 root root 0 Mar 14 10:00 document2.doc

25. -rw-r--r-- 1 root root 0 Mar 14 10:00 document3.doc

26. -rw-r--r-- 1 root root 0 Mar 14 10:00 document4.doc

27. -rw-r--r-- 1 root root 0 Mar 14 10:00 document5.doc

28.

29. /shared/projects/projectXYZ/Stage2/BUDGET:

30. total 8

31. drwxr-xr-x 2 root root 4096 Mar 14 10:00 .

32. drwxr-xr-x 4 root root 4096 Mar 14 10:00 ..

33. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_bg.txt

34. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_de.txt

35. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_en.txt

36.

37. /shared/projects/projectXYZ/Stage2/DOCUMENTS:

38. total 8

39. drwxr-xr-x 2 root root 4096 Mar 14 10:00 .

40. drwxr-xr-x 4 root root 4096 Mar 14 10:00 ..

41. -rw-r--r-- 1 root root 0 Mar 14 10:00 document1.doc

42. -rw-r--r-- 1 root root 0 Mar 14 10:00 document2.doc

43. -rw-r--r-- 1 root root 0 Mar 14 10:00 document3.doc

44. -rw-r--r-- 1 root root 0 Mar 14 10:00 document4.doc

45. -rw-r--r-- 1 root root 0 Mar 14 10:00 document5.doc

46.

47. /shared/projects/projectXYZ/Stage3/BUDGET:

48. total 8

49. drwxr-xr-x 2 root root 4096 Mar 14 10:00 .

50. drwxr-xr-x 4 root root 4096 Mar 14 10:00 ..

51. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_bg.txt

52. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_de.txt

53. -rw-r--r-- 1 root root 0 Mar 14 10:00 readme\_en.txt

54.

55. /shared/projects/projectXYZ/Stage3/DOCUMENTS:

56. total 8

57. drwxr-xr-x 2 root root 4096 Mar 14 10:00 .

58. drwxr-xr-x 4 root root 4096 Mar 14 10:00 ..

59. -rw-r--r-- 1 root root 0 Mar 14 10:00 document1.doc

60. -rw-r--r-- 1 root root 0 Mar 14 10:00 document2.doc

61. -rw-r--r-- 1 root root 0 Mar 14 10:00 document3.doc

62. -rw-r--r-- 1 root root 0 Mar 14 10:00 document4.doc

63. -rw-r--r-- 1 root root 0 Mar 14 10:00 document5.doc

64. vasil@debian:~$ wget -q https://courses.zahariev.pro/m2.sh -O - | sudo bash

65. \* Working on Debian-based machine (BIOS) using wget to report

66. \* Testing for the developer and manager users ...

67. ... PASS

68. \* Testing for the projectxyz group ...

69. ... PASS

70. \* Testing for the projectxyz group members (developer and manager) ...

71. ... PASS

72. \* Testing for the /shared/projects folder ...

73. ... PASS

74. \* Testing for the projectXYZ hierarchy of folders ...

75. ... PASS

76. \* Testing for the documentN.doc set of files ...

77. ... PASS

78. \* Testing for the readme\_NN.txt set of files ...

79. ... PASS

80. \* Testing for the user ownership of the projectXYZ folder and files ...

81. ... ERROR

82. \* Testing for the group ownership of the projectXYZ folder and files ...

83. ... ERROR

84. \* Testing for permissions of the folders ...

85. ... ERROR

86. \* Testing for permissions of the files ...

87. ... ERROR

88. {"message":"Your solution report is available here: https:\/\/courses.zahariev.pro\/check.php?20250314080415VHiQ8FRU9y","status":true}

89.

1. Change the owner of the **projectXYZ** folder and all files and folders there to **manager**

1. sudo chown -R manager /shared/projects/projectXYZ

1. Change the group owner of the **projectXYZ** folder and all files and folders there to **projectxyz**

1. sudo chgrp -R projectxyz /shared/projects/projectXYZ

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1. vasil@debian:~$ sudo chown -R manager /shared/projects/projectXYZ

2. vasil@debian:~$ sudo chgrp -R projectxyz /shared/projects/projectXYZ

3. vasil@debian:~$ wget -q https://courses.zahariev.pro/m2.sh -O - | sudo bash

4. \* Working on Debian-based machine (BIOS) using wget to report

5. \* Testing for the developer and manager users ...

6. ... PASS

7. \* Testing for the projectxyz group ...

8. ... PASS

9. \* Testing for the projectxyz group members (developer and manager) ...

10. ... PASS

11. \* Testing for the /shared/projects folder ...

12. ... PASS

13. \* Testing for the projectXYZ hierarchy of folders ...

14. ... PASS

15. \* Testing for the documentN.doc set of files ...

16. ... PASS

17. \* Testing for the readme\_NN.txt set of files ...

18. ... PASS

19. \* Testing for the user ownership of the projectXYZ folder and files ...

20. ... PASS

21. \* Testing for the group ownership of the projectXYZ folder and files ...

22. ... PASS

23. \* Testing for permissions of the folders ...

24. ... ERROR

25. \* Testing for permissions of the files ...

26. ... ERROR

27. {"message":"Your solution report is available here: https:\/\/courses.zahariev.pro\/check.php?20250314080902k4msY2jbuS","status":true}

1. Change the permissions of the **projectXYZ** folder and all subfolders (***not the files, just the folders***) to be **read**, **write** and **execute** for the owner and the group and **no permissions for everyone else**. Adjust the permissions of all folders in such a way, so all new files made by either the **developer** or the **manager** user will be owned by the **projectxyz** group

1. sudo chmod -R 770 /shared/projects/projectXYZ

2. sudo chmod g+s /shared/projects/projectXYZ /shared/projects/projectXYZ/Stage{1..3} /shared/projects/projectXYZ/Stage{1..3}/{BUDGET,DOCUMENTS}

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1. vasil@debian:~$ sudo chmod -R 770 /shared/projects/projectXYZ

2. vasil@debian:~$ sudo chmod g+s /shared/projects/projectXYZ /shared/projects/projectXYZ/Stage{1..3} /shared/projects/projectXYZ/Stage{1..3}/{BUDGET,DOCUMENTS}

3. vasil@debian:~$ wget -q https://courses.zahariev.pro/m2.sh -O - | sudo bash

4. \* Working on Debian-based machine (BIOS) using wget to report

5. \* Testing for the developer and manager users ...

6. ... PASS

7. \* Testing for the projectxyz group ...

8. ... PASS

9. \* Testing for the projectxyz group members (developer and manager) ...

10. ... PASS

11. \* Testing for the /shared/projects folder ...

12. ... PASS

13. \* Testing for the projectXYZ hierarchy of folders ...

14. ... PASS

15. \* Testing for the documentN.doc set of files ...

16. ... PASS

17. \* Testing for the readme\_NN.txt set of files ...

18. ... PASS

19. \* Testing for the user ownership of the projectXYZ folder and files ...

20. ... PASS

21. \* Testing for the group ownership of the projectXYZ folder and files ...

22. ... PASS

23. \* Testing for permissions of the folders ...

24. ... PASS

25. \* Testing for permissions of the files ...

26. ... ERROR

27. {"message":"Your solution report is available here: https:\/\/courses.zahariev.pro\/check.php?20250314081501O7RSJFqjko","status":true}

28.

1. Set permissions for all files under the above folder structure (**projectXYZ**) to **read** and **write** for the owner and the group and **no permissions for everyone else**

1. sudo find /shared/projects/projectXYZ -type f -exec chmod 660 {} +

A screenshot of a computer program

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A screenshot of a computer

AI-generated content may be incorrect.

1. vasil@debian:~$ sudo find /shared/projects/projectXYZ -type f -exec chmod 660 {} +

2. vasil@debian:~$ sudo ls -lR /shared/projects/projectXYZ | grep -v '^d'

3. /shared/projects/projectXYZ:

4. total 12

5.

6. /shared/projects/projectXYZ/Stage1:

7. total 8

8.

9. /shared/projects/projectXYZ/Stage1/BUDGET:

10. total 0

11. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_bg.txt

12. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_de.txt

13. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_en.txt

14.

15. /shared/projects/projectXYZ/Stage1/DOCUMENTS:

16. total 0

17. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document1.doc

18. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document2.doc

19. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document3.doc

20. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document4.doc

21. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document5.doc

22.

23. /shared/projects/projectXYZ/Stage2:

24. total 8

25.

26. /shared/projects/projectXYZ/Stage2/BUDGET:

27. total 0

28. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_bg.txt

29. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_de.txt

30. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_en.txt

31.

32. /shared/projects/projectXYZ/Stage2/DOCUMENTS:

33. total 0

34. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document1.doc

35. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document2.doc

36. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document3.doc

37. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document4.doc

38. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document5.doc

39.

40. /shared/projects/projectXYZ/Stage3:

41. total 8

42.

43. /shared/projects/projectXYZ/Stage3/BUDGET:

44. total 0

45. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_bg.txt

46. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_de.txt

47. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 readme\_en.txt

48.

49. /shared/projects/projectXYZ/Stage3/DOCUMENTS:

50. total 0

51. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document1.doc

52. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document2.doc

53. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document3.doc

54. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document4.doc

55. -rw-rw---- 1 manager projectxyz 0 Mar 14 10:00 document5.doc

56. vasil@debian:~$ wget -q https://courses.zahariev.pro/m2.sh -O - | sudo bash

57. \* Working on Debian-based machine (BIOS) using wget to report

58. \* Testing for the developer and manager users ...

59. ... PASS

60. \* Testing for the projectxyz group ...

61. ... PASS

62. \* Testing for the projectxyz group members (developer and manager) ...

63. ... PASS

64. \* Testing for the /shared/projects folder ...

65. ... PASS

66. \* Testing for the projectXYZ hierarchy of folders ...

67. ... PASS

68. \* Testing for the documentN.doc set of files ...

69. ... PASS

70. \* Testing for the readme\_NN.txt set of files ...

71. ... PASS

72. \* Testing for the user ownership of the projectXYZ folder and files ...

73. ... PASS

74. \* Testing for the group ownership of the projectXYZ folder and files ...

75. ... PASS

76. \* Testing for permissions of the folders ...

77. ... PASS

78. \* Testing for permissions of the files ...

79. ... PASS

80. {"message":"Your solution report is available here: https:\/\/courses.zahariev.pro\/check.php?20250314083542kDW3Kv5Qga","status":true}

81.

Result

1. {

2. "homework": {

3. "date": "2025-03-14 10:35:42",

4. "family": "Debian",

5. "distribution": "Debian GNU\/Linux 12 (bookworm)",

6. "module": 2,

7. "tests": [

8. {

9. "id": 1,

10. "name": "Testing for the developer and manager users",

11. "result": "PASS"

12. },

13. {

14. "id": 2,

15. "name": "Testing for the projectxyz group",

16. "result": "PASS"

17. },

18. {

19. "id": 3,

20. "name": "Testing for the projectxyz group members (developer and manager)",

21. "result": "PASS"

22. },

23. {

24. "id": 4,

25. "name": "Testing for the \/shared\/projects folder",

26. "result": "PASS"

27. },

28. {

29. "id": 5,

30. "name": "Testing for the projectXYZ hierarchy of folders",

31. "result": "PASS"

32. },

33. {

34. "id": 6,

35. "name": "Testing for the documentN.doc set of files",

36. "result": "PASS"

37. },

38. {

39. "id": 7,

40. "name": "Testing for the readme\_NN.txt set of files",

41. "result": "PASS"

42. },

43. {

44. "id": 8,

45. "name": "Testing for the user ownership of the projectXYZ folder and files",

46. "result": "PASS"

47. },

48. {

49. "id": 9,

50. "name": "Testing for the group ownership of the projectXYZ folder and files",

51. "result": "PASS"

52. },

53. {

54. "id": 10,

55. "name": "Testing for permissions of the folders",

56. "result": "PASS"

57. },

58. {

59. "id": 11,

60. "name": "Testing for permissions of the files",

61. "result": "PASS"

62. }

63. ]

64. }

65. }

66.