

Centro Universitario del Estado de México UAEM

Ingeniería en Computación

Sistemas Operativos



Tarea (Los hashes para los shells)

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1.Utilizamos el comando `ls -l * sh` para poder ver la lista de nuestros shells

```
uaem@DESKTOP-R3NKPLG: ~  
1872 clear  
1873 sha256sum ubuntu-24.04.3-wsl-amd64.wsl  
1874 history  
uaem@DESKTOP-R3NKPLG:~$ ls -l * sh  
ls: cannot access 'sh': No such file or directory  
-rw-r--r-- 1 root root      59 Nov 19 12:44 AlanisAbigailFrankenstein.txt  
-rw-r--r-- 1 root root     116 Nov 19 11:43 AlanisAbigailFrankenstein.txt}  
-rw-r--r-- 1 root root     180 Nov 13 16:12 AlanisAbigailQuijote.txt  
-rw-r--r-- 1 uaem uaem     626 Nov 19 11:23 AlanisAbigailQuijote.txt.gpg  
-rw-r--r-- 1 uaem uaem    1214 Nov 13 16:55 FonsecaJaimeQuijote.txt.gpg  
-rw-r--r-- 1 uaem uaem    1660 Nov 13 16:34 FonsecaJaimeQuijote.txt.gpg.gpg  
-rw-r--r-- 1 uaem uaem    2369 Nov 13 16:39 FonsecaJaimeQuijote.txt.gpg.gpg.asc  
-rw-r--r-- 1 uaem uaem      25 Nov 13 16:35 FonsecaJaimeQuijote.txt.gpg:Zone.Identifier  
-rw-r--r-- 1 uaem uaem      25 Nov 13 16:55 FonsecaJaimeQuijote.txt.gpg:Zone.Identifier  
-rw-r--r-- 1 uaem uaem     285 Oct 16 16:46 IDUNICO.txt  
-rw-r--r-- 1 uaem uaem    3199 Nov 19 12:43 Jimkeys3.asc  
-rw-r--r-- 1 root root      31 Nov  6 16:09 MyPer.txt  
-rw-r--r-- 1 root root     110 Nov  6 16:12 MyPer.txt.gpg  
-rwxr-xr-x 1 uaem uaem     587 Oct 30 15:54 RespSep24.sh  
-rw-r--r-- 1 uaem uaem     833 Nov 20 16:13 SHA256SUMS.gpg  
-rw-r--r-- 1 uaem uaem     25 Nov 20 16:14 SHA256SUMS.gpg:Zone.Identifier  
-rw-r--r-- 1 uaem uaem     395 Sep 26 16:28 S0258.txt  
-rw-r--r-- 1 uaem uaem     395 Sep 26 16:37 UltCon258.txt  
-rw-r--r-- 1 root root      45 Nov  6 16:10 WePer.txt  
-rw-r--r-- 1 uaem uaem     123 Nov  6 16:21 WePer.txt.gpg  
-rw-r--r-- 1 uaem uaem    92747 Aug 22 07:55 'WhatsApp Image 2025-08-22 at 3.45.54 PM.jpeg'  
-rw-r--r-- 1 uaem uaem      61 Aug 22 07:55 'WhatsApp Image 2025-08-22 at 3.45.54 PM.jpeg:Zone.Identifier'  
-rw-r--r-- 1 root root      26 Nov  6 16:10 YourPer.txt  
-rw-r--r-- 1 uaem uaem     288 Nov  6 16:14 YourPer.txt.asc  
-rw-r--r-- 1 uaem uaem    5539 Nov 19 12:43 abigailkey.asc  
-rw-r--r-- 1 uaem uaem     2468 Nov  7 16:47 abikey.asc  
-rw-r--r-- 1 uaem uaem    1331 Nov 19 11:39 ariadnakey.asc  
-rw-r--r-- 1 uaem uaem    6787 Nov 19 12:41 arikey.asc  
-rw-r--r-- 1 uaem uaem     580 Nov 14 16:30 asistenciaAAEA.txt  
-rw-r--r-- 1 root root      40 Nov  7 16:51 cancion.txt  
-rw-r--r-- 1 uaem uaem     520 Nov  7 16:59 cancion.txt.gpg  
-rw-r--r-- 1 uaem uaem     586 Nov  7 17:02 cancion1.txt.gpg  
-rw-r--r-- 1 uaem uaem     25 Nov  7 17:03 cancion1.txt.gpg:Zone.Identifier  
-rw-r--r-- 1 uaem uaem     61 Aug 22 07:59 cartas.jpeg:Zone.Identifier  
-rw-r--r-- 1 uaem uaem    29875 Oct 10 15:02 comandos09Oct25.txt  
-rwxr-xr-x 1 root root     2350 Oct 16 16:37 crear.sh  
-rw-r--r-- 1 uaem uaem     464 Oct 17 16:02 cronCF.txt  
-rw-r--r-- 1 uaem uaem      29 Oct 17 16:03 cronCF2.txt  
-rw-r--r-- 1 uaem uaem      78 Nov  6 15:48 documento.txt  
-rw-r--r-- 1 uaem uaem     265 Nov  6 15:54 documento.txt.asc  
-rw-r--r-- 1 root root     149 Nov  6 16:03 documento.txt.gpg  
-rw-r--r-- 1 uaem uaem      92 Sep 25 15:35 fonseca.txt  
-rw-r--r-- 1 uaem uaem    27521 Nov  6 16:57 historial.txt  
-rw-r--r-- 1 uaem uaem      15 Oct 16 16:13 hola_mundo.txt  
-rw-r--r-- 1 uaem uaem     3829 Oct  3 16:38 iptables.rules  
-rw-r--r-- 1 uaem uaem     2497 Nov  7 16:49 jimmykey.asc
```

```
uaem@DESKTOP-R3NKPLG: ~  
-rw-r--r-- 1 root root      101 Oct 24 17:00 saludos1.txt.gpg  
-rw-r--r-- 1 uaem uaem     5261 Nov  7 15:16 secretkey.asc  
-rw-r--r-- 1 uaem uaem    6345887744 Nov 20 16:08 ubuntu-24.04.3-desktop-amd64.iso  
-rw-r--r-- 1 uaem uaem      25 Nov 20 16:50 ubuntu-24.04.3-desktop-amd64.iso:Zone.Identifier  
-rw-r--r-- 1 uaem uaem    379931026 Nov 20 16:05 ubuntu-24.04.3-wsl-amd64.wsl  
-rw-r--r-- 1 uaem uaem      25 Nov 20 16:43 ubuntu-24.04.3-wsl-amd64.wsl:Zone.Identifier  
-rw-r--r-- 1 uaem uaem       0 Oct 17 16:30 update.txt  
-rw-r--r-- 1 uaem uaem      94 Oct 16 16:31 usuarios.txt  
-rw-r--r-- 1 uaem uaem     185 Oct 16 16:31 usuarios_readable.txt  
  
backupNov25:  
total 22872  
-rw-r--r-- 1 uaem uaem    5873878 Nov  7 17:05 backup971125_170508.tar.gz  
-rw-r--r-- 1 uaem uaem    5877267 Nov 10 17:05 backup101125_170501.tar.gz  
-rw-r--r-- 1 uaem uaem    5827995 Oct 30 15:54 backup301025_155032.tar.gz  
-rw-r--r-- 1 uaem uaem    5827995 Oct 30 16:01 backup301025_160102.tar.gz  
-rw-r--r-- 1 uaem uaem      132 Oct 30 16:01 log_respaldo.txt  
  
ejercicios_shell:  
total 108  
-rwxr-xr-x 1 root root      31 Nov 10 16:26 01-hola-mundo.sh  
-rwxr-xr-x 1 uaem uaem      29 Nov 10 16:27 02-hola-parametros.sh  
-rwxr-xr-x 1 root root     114 Nov 10 16:29 03-hola-al-menos-1-parametro.sh  
-rwxr-xr-x 1 root root     287 Nov 10 16:32 04-hola-parametros-separados.sh  
-rwxr-xr-x 1 root root     877 Nov 10 16:34 05-hola-con-ayuda.sh  
-rwxr-xr-x 1 root root     993 Nov 10 16:36 06-hola-usuario.sh  
-rwxr-xr-x 1 uaem uaem     497 Nov 10 16:49 09-ejercicio9.sh  
-rwxr-xr-x 1 uaem uaem     614 Nov 10 16:51 10-ejercicio10.sh  
-rwxr-xr-x 1 uaem uaem     727 Nov 10 16:52 11-ejercicio11.sh  
-rwxr-xr-x 1 uaem uaem     628 Nov 10 16:54 12-ejercicio12.sh  
-rwxr-xr-x 1 uaem uaem     460 Nov 10 16:55 13-ejercicio13.sh  
-rwxr-xr-x 1 uaem uaem     650 Nov 10 16:55 14-ejercicio14.sh  
-rwxr-xr-x 1 uaem uaem     635 Nov 10 16:56 15-ejercicio15.sh  
-rwxr-xr-x 1 uaem uaem     784 Nov 10 16:57 16-ejercicio16.sh  
-rwxr-xr-x 1 uaem uaem     635 Nov 10 16:58 17-ejercicio17.sh  
-rwxr-xr-x 1 uaem uaem     741 Nov 10 16:59 18-ejercicio18.sh  
-rwxr-xr-x 1 uaem uaem     609 Nov 10 17:00 19-ejercicio19.sh  
-rwxr-xr-x 1 uaem uaem     546 Nov 10 17:01 20-ejercicio20.sh  
-rwxr-xr-x 1 uaem uaem     628 Nov 10 17:01 21-ejercicio21.sh  
-rwxr-xr-x 1 uaem uaem     422 Nov 10 17:03 22-ejercicio22.sh  
-rwxr-xr-x 1 uaem uaem     618 Nov 10 17:04 23-ejercicio23.sh  
-rwxr-xr-x 1 uaem uaem     638 Nov 10 17:04 24-ejercicio24.sh  
-rwxr-xr-x 1 uaem uaem     710 Nov 10 17:06 25-ejercicio25.sh  
-rw-r--r-- 1 root root      45 Nov 10 17:05 copia.txt  
-rw-r--r-- 1 uaem uaem      45 Nov 10 16:50 nuevo_nombre.txt  
-rw-r--r-- 1 uaem uaem      40 Nov 10 16:51 prueba10.txt  
-rwxr-xr-x 1 root root     586 Nov 10 16:39 usuarioconectado  
  
snap:  
total 4  
drwxr-xr-x 5 uaem uaem 4096 Nov 29 15:16 btop
```

sha256sum

2. Utilizamos el comando **sha256sum *.sh** para generar los hashes SHA-256, como la mayoría esta en la carpeta de ejercicios_shells nos metemos a esa carpeta con el comando **cd ejercicios_shells** y ejecutamos el comandando anterior otra vez como se muestra a continuación

```
uaem@DESKTOP-R3NKPGLG: ~$ sha256sum *.sh
-rwxr-xr-x 1 uaem uaem 460 Nov 10 16:55 13-ejercicio13.sh
-rwxr-xr-x 1 uaem uaem 650 Nov 10 16:55 14-ejercicio14.sh
-rwxr-xr-x 1 uaem uaem 635 Nov 10 16:56 15-ejercicio15.sh
-rwxr-xr-x 1 uaem uaem 784 Nov 10 16:57 16-ejercicio16.sh
-rwxr-xr-x 1 uaem uaem 635 Nov 10 16:58 17-ejercicio17.sh
-rwxr-xr-x 1 uaem uaem 741 Nov 10 16:59 18-ejercicio18.sh
-rwxr-xr-x 1 uaem uaem 609 Nov 10 17:00 19-ejercicio19.sh
-rwxr-xr-x 1 uaem uaem 546 Nov 10 17:01 20-ejercicio20.sh
-rwxr-xr-x 1 uaem uaem 628 Nov 10 17:01 21-ejercicio21.sh
-rwxr-xr-x 1 uaem uaem 422 Nov 10 17:03 22-ejercicio22.sh
-rwxr-xr-x 1 uaem uaem 618 Nov 10 17:04 23-ejercicio23.sh
-rwxr-xr-x 1 uaem uaem 838 Nov 10 17:04 24-ejercicio24.sh
-rwxr-xr-x 1 uaem uaem 710 Nov 10 17:06 25-ejercicio25.sh
-rw-r--r-- 1 root root 45 Nov 10 17:05 copia.txt
-rw-r--r-- 1 uaem uaem 45 Nov 10 16:50 nuevo_nombre.txt
-rw-r--r-- 1 uaem uaem 40 Nov 10 16:51 prueba10.txt
-rwxr-xr-x 1 root root 506 Nov 10 16:39 usuarioconectado

snap:
total 4
drwxr-xr-x 5 uaem uaem 4096 Nov 20 15:16 btop
uaem@DESKTOP-R3NKPGLG:~$ sha256sum *.sh
b17aa6b57e59d9190102ababe2271cd7fdb76787a90233e0100dc25e2963911 RespSep24.sh
746385777fe7a96f199349a38ba5b2bbac466cd135ef2dda8d8d0700653478c7 crear.sh
6ce74b05ad1ec6e76bce69f1679df60e49d57ee3318ac387c31fa7f37f947125 name.sh
uaem@DESKTOP-R3NKPGLG:~$ cd ejercicios_shell
uaem@DESKTOP-R3NKPGLG:~/ejercicios_shell$ sha256sum *.sh
d0682e8dcf895db5ef7c259d7037c8ca3dd4ed7998542255e4d4bab9eca6f0b67 01-hola-mundo.sh
caeef62671f668434be5f9e60ebe8eb233275c960ffbdb5b6052c4e7a26f51c 02-hola-parametros.sh
01cf20477481764f66d136bdec08ef5d4e1167a30bda82b5f5cadb8d3c4dcfe9 03-hola-al-menos-1-parametro.sh
18d5a19bc29e6c22c0686d54f2cd1d09ea28587e8fb72986f6e898d0640fd4f59 04-hola-parametros-separados.sh
84e95ef0e353d1976f1a33eb8a4e7dddf88a549cabad7c61e9457f1e63c3f04c0 05-hola-con-ayuda.sh
6ff7cf0d661521f87e896d8b4991728e692cfff7c6cf0160479ead02a8a0787da 06-hola-usuario.sh
a1de92fcd2fb83f1b5307bc6a9aa38e1fb8e78fe505f574f2f3a910226105cb 09-ejercicio9.sh
15d4d4b6b43932dc54ee57bb7cf7f1d4ef73fb3b01cf1ea60696af144316dd8 10-ejercicio10.sh
563cc76cbe6a8e02b2b5bd5598ab064d1cc92786567a467af6ec0861a73fddf 11-ejercicio11.sh
19aa7f171c339a4b9776af767176f0355e18a396ddec3172d1e1a3e1eec018 12-ejercicio12.sh
5043c9a0f3eca0dd3761d64f26c092bca1b600d28b6972b5eb178577baf4b5 13-ejercicio13.sh
8f32032b375502fb6ebd733d6520b3be4a79a860dbf8a1f59fc6968b28ebddcd 14-ejercicio14.sh
ee862aed0d471be9a2c158417bcd95f5da598425ced5779a43a64c54817ef5 15-ejercicio15.sh
0247625a01197a51ae0bf381a0293723b85eea3979146434bb1679dfc8b9c50 16-ejercicio16.sh
0e91eaeaca50d00ff8ab60f3e622cb14bfad2c2eb792f6663a7959c8312d1eb13 17-ejercicio17.sh
8799db644f898e3876113e4cce10277674a109d2a85f2aa76b0dc251ee45c6f8 18-ejercicio18.sh
ec39f015d4086ed5e8362a7403bca04602e21af1f75c91e73622d30eb7b50dd0 19-ejercicio19.sh
56aed7032949b766d0743ec33fb17d9546ee66988f992f4de4035a438bef75ba 20-ejercicio20.sh
fc3ad29eb679e23fa919f1fa5291adc237ceb2c8a827c6426740d1bcbaf7ff3 21-ejercicio21.sh
72b56ea35dfec2d123cd1be1e392e4f6d2021978d6c83767e0d9af012b75c9b3 22-ejercicio22.sh
50ec3614c5c3876a4ae88e2cdd2f6e8afa41d9f8cbb44046282addcc5699040bcac 23-ejercicio23.sh
4c324d4ebc6b99c1c612a488bf747595776a3f3024e190735d57dd10b6e73b42 24-ejercicio24.sh
bf440f035c28177ac4f49134254f97a18ddac4aac1069715d43b7117923a42 25-ejercicio25.sh
uaem@DESKTOP-R3NKPGLG:~/ejercicios_shell$
```

3. Como quiero guardar los hashes los voy a meter en un txt con el comando **sha256sum *.sh > hashes.txt**

```
uaem@DESKTOP-R3NKPGLG:~/ejercicios_shell$ sha256sum *.sh > hashes.txt
uaem@DESKTOP-R3NKPGLG:~/ejercicios_shell$ sudo cat hashes.txt
[sudo] password for uaem:
d0682e8dcf895db5ef7c259d7037c8ca3dd4ed7998542255e4d4bab9eca6f0b67 01-hola-mundo.sh
caeef62671f668434be5f9e60ebe8eb233275c960ffbdb5b6052c4e7a26f51c 02-hola-parametros.sh
01cf20477481764f66d136bdec08ef5d4e1167a30bda82b5f5cadb8d3c4dcfe9 03-hola-al-menos-1-parametro.sh
18d5a19bc29e6c22c0686d54f2cd1d09ea28587e8fb72986f6e898d0640fd4f59 04-hola-parametros-separados.sh
84e95ef0e353d1976f1a33eb8a4e7dddf88a549cabad7c61e9457f1e63c3f04c0 05-hola-con-ayuda.sh
6ff7cf0d661521f87e896d8b4991728e692cfff7c6cf0160479ead02a8a0787da 06-hola-usuario.sh
a1de92fcd2fb83f1b5307bc6a9aa38e1fb8e78fe505f574f2f3a910226105cb 09-ejercicio9.sh
15d4d4b6b43932dc54ee57bb7cf7f1d4ef73fb3b01cf1ea60696af144316dd8 10-ejercicio10.sh
563cc76cbe6a8e02b2b5bd5598ab064d1cc92786567a467af6ec0861a73fddf 11-ejercicio11.sh
19aa7f171c339a4b9776af767176f0355e18a396ddec3172d1e1a3e1eec018 12-ejercicio12.sh
5043c9a0f3eca0dd3761d64f26c092bca1b600d28b6972b5eb178577baf4b5 13-ejercicio13.sh
8f32032b375502fb6ebd733d6520b3be4a79a860dbf8a1f59fc6968b28ebddcd 14-ejercicio14.sh
ee862aed0d471be9a2c158417bcd95f5da598425ced5779a43a64c54817ef5 15-ejercicio15.sh
0247625a01197a51ae0bf381a0293723b85eea3979146434bb1679dfc8b9c50 16-ejercicio16.sh
0e91eaeaca50d00ff8ab60f3e622cb14bfad2c2eb792f6663a7959c8312d1eb13 17-ejercicio17.sh
8799db644f898e3876113e4cce10277674a109d2a85f2aa76b0dc251ee45c6f8 18-ejercicio18.sh
ec39f015d4086ed5e8362a7403bca04602e21af1f75c91e73622d30eb7b50dd0 19-ejercicio19.sh
56aed7032949b766d0743ec33fb17d9546ee66988f992f4de4035a438bef75ba 20-ejercicio20.sh
fc3ad29eb679e23fa919f1fa5291adc237ceb2c8a827c6426740d1bcbaf7ff3 21-ejercicio21.sh
72b56ea35dfec2d123cd1be1e392e4f6d2021978d6c83767e0d9af012b75c9b3 22-ejercicio22.sh
50ec3614c5c3876a4ae88e2cdd2f6e8afa41d9f8cbb44046282addcc5699040bcac 23-ejercicio23.sh
```

4. Con el siguiente comando podemos verificar los hashes **sha256sum -c hashes.txt**, esto comparará cada **script .sh** con el hash guardado en hashes.txt

```
uam@DESKTOP-R3NKPGLG:~/ejercicios_shell$ sha256sum -c hashes.txt
01-hola-mundo.sh: OK
02-hola-parametros.sh: OK
03-hola-al-menos-1-parametro.sh: OK
04-hola-parametros-separados.sh: OK
05-hola-con-ayuda.sh: OK
06-hola-usuario.sh: OK
09-ejercicio9.sh: OK
10-ejercicio10.sh: OK
11-ejercicio11.sh: OK
12-ejercicio12.sh: OK
13-ejercicio13.sh: OK
14-ejercicio14.sh: OK
15-ejercicio15.sh: OK
16-ejercicio16.sh: OK
17-ejercicio17.sh: OK
18-ejercicio18.sh: OK
19-ejercicio19.sh: OK
20-ejercicio20.sh: OK
21-ejercicio21.sh: OK
22-ejercicio22.sh: OK
23-ejercicio23.sh: OK
24-ejercicio24.sh: OK
25-ejercicio25.sh: OK
uam@DESKTOP-R3NKPGLG:~/ejercicios_shell$
```

Sha384sum

5. Ahora repetiremos lo anterior, pero con diferentes hashes en este caso es sha384sum

```
uam@DESKTOP-R3NKPGLG: ~ - Ubuntu
25-ejercicio25.sh: OK
uam@DESKTOP-R3NKPGLG:~/ejercicios_shell$ sha384sum *.sh
e9b373e9e9-952f2fc774f5336e2869b9081589e-d196d3e6f1daf6e5d8f6556bc1e98ab4d5d8a788bd4a6b77755c-2749c-4l 01-hola-mundo.sh
d65f71b209094a927f7c3d351a299f3f6e05483de768eb5d4eb97fb9b54dd6c39b8aaca70e799029b88344880e5a48a 02-hola-parametros.sh
4875ff121d1f12e0022d14ba3a376dc5614ea46f5da767291f6160bf4715f0711712a7bbfb36dc8ffdc97821762f551845 03-hola-al-menos-1-parametro.sh
7596e1f60b8637bbadff50494edab378308ec777836e913197342d5368611fe0a1044083cc594aaabce40758f698cf4f1 04-hola-parametros-separados.sh
da9662aca5546ec690f252e9a9792b33bce2c22fe410c1dc2f26bfdd2c33720910057110e771474f48fc5eaf1f61f9a9 05-hola-con-ayuda.sh
7c4ea4b4a7911f0eebe2c6ef36d77b8d842d5f30e80fe5a8e933edf1a5b4d26911dbc2281fd60b886bd437db946f076 06-hola-usuario.sh
1857c752a329017b208a4e199e58d9582762648e732def6f7a60555569d08d3cc978ac318d86f1e51512ac7f97738a8c 09-ejercicio9.sh
4d6535001f61ea847d9c9c609b59fae2d5431bfc3b97dc7667be9419f72fb5b33904d2cb07750a468facb3fdff57f2c7 10-ejercicio10.sh
92fd2aaf5e2463df12af03d2d6f7b6c7a9edbbf64920677a18335c9261d0dba844fc63e3e7bad415fe7dc9fd50f1453a 11-ejercicio11.sh
b456ba5a36bbdb409d5f52614f96028c0bc544c74d07552f40db8e3335075799178b352997345e77c375da30f2fb46fb 12-ejercicio12.sh
c15b7a9e3af2e46d02beccdf5d50709cfdad3bf9b1693db3c2d4093a087b74a857a9017ed751cd7437bed4cf963ab5 13-ejercicio13.sh
8a0a373fbcc75dc16f5f7b5a675a3a87ef311d098f0eabc6d959c69c331da1c6fbd8e2bb272091c8fb14eb3d5ada93d 14-ejercicio14.sh
0097706ce59ad7f5f6cd8a746747449d813ba94ce1346421851395ad20dc434bede27ec9ea644c76e288cc68c49b852c 15-ejercicio15.sh
5ad79f742c2b61cc2c044b7377d14199dac68920fb4f97b799a2aa2d5678c4a9acdddb97bd1673f4570b319b964ba29ce 16-ejercicio16.sh
4015f0180297a3ac7e1bf87857283c74da8be2051579a7cc14ac8fc6f0a58fd1662151c7c10b0fa7a205df9701c2a88 17-ejercicio17.sh
191db26413c5b436df0edeb121ada8ffd73b5e7af00eeb8a86cda0de4409d21c0089c23ce4ffcb2620eaf672628c9e9f 18-ejercicio18.sh
1f321c3737eedcb4e1882ae1733a7514b4f4a9713a0641c2421a55a81ab415efc722fc0bfcc646d6f9adb28af9931a 19-ejercicio19.sh
05a69f43d581a66c1c6939487f37019d0961b9466229241b58faaff41d4baf2ba4f012c4421546487f3ebef691aae1 20-ejercicio20.sh
8b0c9dfad0f45b715a48f4ca243ad3940906592de220e6f3c7414c60f9d61fad9731c13e8202630145065bd67cf4e5a9 21-ejercicio21.sh
bc0bc63081030e62e767c25fb8114f8e9f653fbc78977f3547dc0b50f402ed6f42f5466cc479717709390f70892a 22-ejercicio22.sh
3b0cf90b6808c4466fce60a6706ce8abff31386a0756039d11db586faad85f1f018a38878a4d90461e529ee74f4868a5 23-ejercicio23.sh
d199cd03c7732608664055517bd104b3148768a6e5d6c21b0c6031c6ea1753ac4e82b6a5c9ed0ad676df44c5808 24-ejercicio24.sh
a6804fb488805453e442e9a7c5edf263f511750ad2c70a19b52605d1f22ee80653016210d4e212227e2b431b87b63c2 25-ejercicio25.sh
uam@DESKTOP-R3NKPGLG:~/ejercicios_shell$ sha384sum *.sh > hashes384.txt
uam@DESKTOP-R3NKPGLG:~/ejercicios_shell$ sha384sum -c hashes.txt
sha384sum: hashes.txt: no properly formatted checksum lines found
uam@DESKTOP-R3NKPGLG:~/ejercicios_shell$ sha384sum -c hashes384.txt
01-hola-mundo.sh: OK
02-hola-parametros.sh: OK
03-hola-al-menos-1-parametro.sh: OK
04-hola-parametros-separados.sh: OK
05-hola-con-ayuda.sh: OK
06-hola-usuario.sh: OK
09-ejercicio9.sh: OK
10-ejercicio10.sh: OK
11-ejercicio11.sh: OK
12-ejercicio12.sh: OK
13-ejercicio13.sh: OK
14-ejercicio14.sh: OK
15-ejercicio15.sh: OK
16-ejercicio16.sh: OK
17-ejercicio17.sh: OK
18-ejercicio18.sh: OK
19-ejercicio19.sh: OK
20-ejercicio20.sh: OK
21-ejercicio21.sh: OK
22-ejercicio22.sh: OK
23-ejercicio23.sh: OK
24-ejercicio24.sh: OK
```

Sha512sum

```
user@DESKTOP-R3NKLPLG: ~ % Ubuntu
25-ejercicio25.sh: OK
user@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha512sum *.sh
51e6a2397f408089f9c94a6199a13ad91eab5b47c1225d5603ab1563687253a62480d15d4c47c20c356517ad53aa154f4411f3980ca1dbcd239af991ee1fc58679
e11603fda7f35352e3447704e2b5829c0e009fcd5b4014c9b85fecdc4504e43fb934bcaae6983a6c9908a91c83988f32c580acc95e893f75db14d958e3d899f56
5c336854186dd6c52f9f9892b1bfacfb48f05b232833430eca2d4f442dfb4f8053c150c0b206204e76519691b63b2e7a120fb3ba74ffff48c1146528afdb85c875
da2966f9779becba91eeddfb8a15c25ad8f19912633d6536b5b8994f65f099e7184ed51650c125ecb81cd68336cf868f2c650f1a2325707f7fb4c1806a5388ca
5a0b1c412a2f4f55914775d60808cbe4f713a682ee37c9414ce0021536620534d5999aa7a2a5f8a606f5e2b4972a403984d2a4536c152a7f66
0042ca47b7b92969f94edfc3d6e80428ca9186aaabeb2b945e1692067e239b7d2ce12d11684ea3e7b5f2f772f74ca759ce5f50dbacd516bf8721b8a9dbac6fb
37c7da6d79d11cd4a01c810e3381d9a826459a038a06c6fb4bf4d3c3024abb1e8fd3da116413f00f2ca02818865f7d3b88a7007474ed500d63af2d720816ab05
31a28f2e2a9a95b5e211fae8b226f824b99c7277b1c178a5ea087c326ead391896688a845a57914972cdd85d4e1ab884bc7fc61e8eedf35080678c1e78dd
8b6efc6addda7aa6f369645d5f1ef9f9db9575708cb13e70a0806ddc55200d1f377f2cb82f2175e08510e8ddc8a6f4ecab5d67205fc48ceac1c90326571940a
c56f387403d08b3bde4dec5996c5350b206ccb3e0fc88f4c1149890f5d51b812f73e31a5a1d851d37e9187a333a5f6dcd6dafb7d629d0f479474f9f6a141b9a
6351b1fd319a32e1e11b98d21cf340217bebad619595fcd47276f91796bae889d37453f5b399274bb968805763baba5d3106fca55b4c97bc60c29642f0330e8a
8bfcc1fd696a767113608c13b1179143ae2a07e84128e9ebal159c990a1af9ef2bb62ad559b24765a742aaba7b71efd8c27da177897106d9d35ed8199580
082324f4894de2cd4399c5c5f01bf6ab0b3f0f0c4f85d1323931e97729d29ab83f0f10245850d8b00abde7b6d1bfc85cf75ff0ccff8c65e8c333eb83d7de396
cae49c5e5860e1b12908e70e106511b76c88a12a37f21d015447085c3f7f57722f904eb1083d929f9c57fb763ede8508d0bb307c7eb1580f8a406
79787d0ad0b2117fab5bda764f4e894ee89674b79a3f3ac60a0610e75d5f8b1f4af047b0322a2bca7a61d83d2cbeba0855a0073f6b10813f4071c6870b85
00ba657655506175e95cbaa68e220818285a5c1fbc6df958021d5aa72e28bd9ad5e8a3b03167151b707efc8b8091da5f28cc869f8cfc04a08d82f2192fb04
50a8643b7178e6db2b568635da92669575c04f1bbad1d654acd53dc02352c4a937ce6c5af531e1b043ed28858abfbcfb74d2dbaa7f680ce310e8ac39644fb
2d4dfe6e4312937b608a31692722a87dc03fc276c58a696c529b19a6cd38c24e3ab4f3908db103074adabada40ef733987b58b6f47b396e3f4f6a42de65d9d772
a1f4ldfcaaa4573a2031cee9077ac2cf97173b45e8c7d3f427afa3843c2438fb5798291c0e69a6e6f243c0c667dcdad09131d436b73758b016823a3b5bf4a
0c89ba653ba8202f0c39b6b2d6fdada9a11dda9ee3582e68bb8040ed0e948c66ffa58d4d0961451bc969e34f2017873f5429c2969a75e5c139a470b8d3ca2
e83da21899176904d22de6a6b9976ec4c51d430f5e4c51e1fb1f4b4a424d88e8f637c8706a09cdf1e4c5f0a61b0f758e7bc79b2c5969f763cbf9a5633dc
91fba42e9fb11144a20c4f6e4672b1b25dad58c7af84fb5632b37fcb336326e501129538d447f9af3d63eb64a93f1407337c920114323a513b9291b9c13
f8942f01f464d6de21452090606c7b3e58958ac32f590a8d09082bcd19a6aca8371092f4a8973b14bcb2f9a39e6e8a4a788b26afbd8b44ffc8f5722c360be3a
user@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha512sum -c hashes512.txt
sha512sum: hashes512.txt: No such file or directory
user@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha512sum *.sh > hashes512.txt
user@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha512sum -c hashes512.txt
01-hola-mundo.sh: OK
02-hola-parametros.sh: OK
03-hola-al-menos-1-parametro.sh: OK
04-hola-parametros-separados.sh: OK
05-hola-con-ayuda.sh: OK
06-hola-usuario.sh: OK
09-ejercicio9.sh: OK
10-ejercicio10.sh: OK
11-ejercicio11.sh: OK
12-ejercicio12.sh: OK
13-ejercicio13.sh: OK
14-ejercicio14.sh: OK
15-ejercicio15.sh: OK
16-ejercicio16.sh: OK
17-ejercicio17.sh: OK
18-ejercicio18.sh: OK
19-ejercicio19.sh: OK
20-ejercicio20.sh: OK
21-ejercicio21.sh: OK
22-ejercicio22.sh: OK
23-ejercicio23.sh: OK
24-ejercicio24.sh: OK
25-ejercicio25.sh: OK
```

Sha224sum

```
user@DESKTOP-R3NKLPLG: ~ % Ubuntu
Try: sudo apt install <deb name>
user@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha224sum *.sh
6e681311b83f06c12645fd28a1055da03924c145ffbd2f136f71290 01-hola-mundo.sh
217f83e295f9a403a5caa5e14a1134e91ccccb1feafadb23a723d7a2 02-hola-parametros.sh
5c58e7b73e5f73a09a1d93d08c6f1eb7fab371bbd291531fidef67615ee 03-hola-al-menos-1-parametro.sh
f178eb2b72d810781c21f16acfc5e856f6378b095ae0b16e903e 04-hola-parametros-separados.sh
ct47b647e4626de4f77830157ebf95881d6d92b8c9f88dbf05fa170a0 05-hola-con-ayuda.sh
3556537cb947609602bba065df89beb2d4f96718cea6cf7e887bf3c2d9 06-hola-usuario.sh
d7fa6e3132e672b77f53462b6a44f4b66868841788882c08f92a7193 09-ejercicio9.sh
206ab4f9f61d209e094151dd3bbf7d8820b6524819a0d03f6d74d171 10-ejercicio10.sh
32c42b987c1c012127edc49b07bad8afc8363493e9d52fa3b893464f 11-ejercicio11.sh
ae934882e0e3fbb100b49f2941a7ee2db3ae04b5f7b7560dd6a571 12-ejercicio12.sh
7e5cbf9965aa8c009a627c7b79047c45277bd4638c2b8c8201d913b6 13-ejercicio13.sh
b2ec1fd82a97941115e873b880a8df88f7c9fea713ea38761ff75a2 14-ejercicio14.sh
02a80eb0e01c0172ae6fc0aeb10074f8ef9e0470e0e0631ce04 15-ejercicio15.sh
6c3ec66f408510ea714a665ac77b5e5a6dc8a699ccdd0bfc04acfb3a 16-ejercicio16.sh
e826757a86f58db4abc15d2950c16aeacac6173fb3c9416f7f72f29 17-ejercicio17.sh
61f4d44703a0a11546b01c370921f2ecc2166137d706e9ea721a62a 18-ejercicio18.sh
99285e012e1521798edc6a3f7ba72eede8022a1813f92cd40a7afac 19-ejercicio19.sh
91a432f2c35f9dc02a2dc3e0224fe232272172a23c6df19a6318cf85f 20-ejercicio20.sh
61c1da800e333871150125502675e8b85c37e2de094f0db7c2fca2e 21-ejercicio21.sh
16838447f4f03c1fd9f880be966a151ce57bc2cc53db1f95061521a0 22-ejercicio22.sh
2d4d4ad428c8882c2fba36de5d74c45c753b3735120b1a1e0fb9412c 23-ejercicio23.sh
dd472e90a16205535f910ef4f4e405c3f32a2de2cd812687fb 24-ejercicio24.sh
77d6346ce88d08c3c37baef64a22c58e02de619efa09ac12202671 25-ejercicio25.sh
user@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha224sum *.sh > hashes224.txt
user@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha224sum -c hashes224.txt
01-hola-mundo.sh: OK
02-hola-parametros.sh: OK
03-hola-al-menos-1-parametro.sh: OK
04-hola-parametros-separados.sh: OK
05-hola-con-ayuda.sh: OK
06-hola-usuario.sh: OK
09-ejercicio9.sh: OK
10-ejercicio10.sh: OK
11-ejercicio11.sh: OK
12-ejercicio12.sh: OK
13-ejercicio13.sh: OK
14-ejercicio14.sh: OK
15-ejercicio15.sh: OK
16-ejercicio16.sh: OK
17-ejercicio17.sh: OK
18-ejercicio18.sh: OK
19-ejercicio19.sh: OK
20-ejercicio20.sh: OK
21-ejercicio21.sh: OK
22-ejercicio22.sh: OK
23-ejercicio23.sh: OK
24-ejercicio24.sh: OK
25-ejercicio25.sh: OK
user@DESKTOP-R3NKLPLG:~/ejercicios_shell$
```

Sha1sum

```
user@DESKTOP-R3NKLPLG: ~  
25-ejercicio25.sh: OK  
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha1sum *.sh  
f7d23948e29dbfab7024c10f21ee6a95de23a18 01-hola-mundo.sh  
8cf8bec41936d26b5e8582779cc943966ec6404b 02-hola-parametros.sh  
a3893133f60d4e944cf57d597d6579fed012e73a 03-hola-al-menos-1-parametro.sh  
7351ec8d9b1bb4d4734338b4db2efe1e1d5a2280 04-hola-parametros-separados.sh  
728764629f022cf7596e6a76903bcdbf0b9a40 05-hola-con-ayuda.sh  
a5895ae241f1d165078a16737e0959511918ced5d 06-hola-usuario.sh  
b2088f763eeec1d147e160b39e09580f1349c1 09-ejercicio9.sh  
78214cab30cb9da8b97782691247ba893a66324e 10-ejercicio10.sh  
ba7c7eb503a2f2883c2b5a4ddefaf261ccf204313 11-ejercicio11.sh  
9e7a5b67786617e5cbe9177575522f84d780a207 12-ejercicio12.sh  
b6cd781c7004e591ebe5c7142f1b2b48a4a45a0d 13-ejercicio13.sh  
781ca216d2982d4f07b47697e856870de79ad6833 14-ejercicio14.sh  
75d862578614096c610b88f3c9585fe26f2ef832 15-ejercicio15.sh  
725f811cd09e309f6e734a4fd11c3f9e0e3e3e2c 16-ejercicio16.sh  
188f1e26b0670961191403302cbb87eab5d966f 17-ejercicio17.sh  
e28f12256422ed986e60565fb5e936821177694a 18-ejercicio18.sh  
90d0503f29ebf0177d6447a030b17cdf89005cbbd 19-ejercicio19.sh  
3297017ab9e85fd9dedd1beaba4f651f68cf759f 20-ejercicio20.sh  
62fd7c623232e3019093db4081157384f0eba43a 21-ejercicio21.sh  
b52bc71b43569d652a926732905fe6b3e589126e 22-ejercicio22.sh  
f852f04799c89d5333bcb8c280253e0fc0e854a1 23-ejercicio23.sh  
effd1cea2d091dcf73a1cefaf0e2ceefc62cc5a 24-ejercicio24.sh  
3928cfa2007bd909213e4uufc6e0b09b02a6293 25-ejercicio25.sh  
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha1sum *.sh > hashes1.txt  
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$ sha1sum -c hashes1.txt  
01-hola-mundo.sh: OK  
02-hola-parametros.sh: OK  
03-hola-al-menos-1-parametro.sh: OK  
04-hola-parametros-separados.sh: OK  
05-hola-con-ayuda.sh: OK  
06-hola-usuario.sh: OK  
09-ejercicio9.sh: OK  
10-ejercicio10.sh: OK  
11-ejercicio11.sh: OK  
12-ejercicio12.sh: OK  
13-ejercicio13.sh: OK  
14-ejercicio14.sh: OK  
15-ejercicio15.sh: OK  
16-ejercicio16.sh: OK  
17-ejercicio17.sh: OK  
18-ejercicio18.sh: OK  
19-ejercicio19.sh: OK  
20-ejercicio20.sh: OK  
21-ejercicio21.sh: OK  
22-ejercicio22.sh: OK  
23-ejercicio23.sh: OK  
24-ejercicio24.sh: OK  
25-ejercicio25.sh: OK  
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$
```

rmd160

```
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$ openssl rmd160 *.sh  
RIPEMD-160(01-hola-mundo.sh)= 7528bbf3abe5151a6ffa3d7f1559e4ac8e648aa  
RIPEMD-160(02-hola-parametros.sh)= ba25004882d8a983e4ed449dd4a7fcbf22924925  
RIPEMD-160(03-hola-al-menos-1-parametro.sh)= 61f43c5a4a998b12d9f7d9671d383b386338b6d0  
RIPEMD-160(04-hola-parametros-separados.sh)= 46d733ca31907201832c55934ab7be1db1dbcf3d  
RIPEMD-160(05-hola-con-ayuda.sh)= 65fe18903db5082aa9715aad63a6b6343d2fa67d  
RIPEMD-160(06-hola-usuario.sh)= 0854959b32e4bfa2c83839f7610ba9203905f04  
RIPEMD-160(09-ejercicio9.sh)= 4b3c7bb6b0c568133b5cc650d8d6ac3cd9079aef  
RIPEMD-160(10-ejercicio10.sh)= bce7378470cea4b74bda106cadb36694c66af4f  
RIPEMD-160(11-ejercicio11.sh)= 8acbcac7a15352a016232ab5ac669c0f745dc1bb  
RIPEMD-160(12-ejercicio12.sh)= 53a3ce8ac427f2a03e993e936c09c4aa65e2a3c  
RIPEMD-160(13-ejercicio13.sh)= 73dfde2ab3fa8e41b09ffdfef41f37babfeb6097  
RIPEMD-160(14-ejercicio14.sh)= bb851e97c9684cc25bcccee7ae80bbe7a8f5ce27  
RIPEMD-160(15-ejercicio15.sh)= 20ab44da0cc99fcc0d31e1d974329ceb94a7ee52  
RIPEMD-160(16-ejercicio16.sh)= 190e973e9ccc62a7094647e63826b53979847cee  
RIPEMD-160(17-ejercicio17.sh)= b041230c8a564bba0931904f7ca816f1aa98187  
RIPEMD-160(18-ejercicio18.sh)= fc74f387d2f6cb2040d35db3664de7e9173caeff  
RIPEMD-160(19-ejercicio19.sh)= e4f87ef0bab90b72a4ed7cb714d4a88a959046b0  
RIPEMD-160(20-ejercicio20.sh)= 728363174e60b25c9f3557af537513692456c42e  
RIPEMD-160(21-ejercicio21.sh)= 9629c83719d61404fa0d7890a9cd57de53340ef1  
RIPEMD-160(22-ejercicio22.sh)= 1d7e3dbec5e95f65b12a9e519de39e944a6eac75  
RIPEMD-160(23-ejercicio23.sh)= 5627dae01ef851056f5a3fcb0f4864ff5ea6dbe0  
RIPEMD-160(24-ejercicio24.sh)= f25d233038ce4fa5a1397dc50065c3bc3d769ceb  
RIPEMD-160(25-ejercicio25.sh)= 681f2bb99bab693f5789218f74686f34b76a3be2  
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$ openssl rmd160 -c hashes160.txt  
hashes160.txt: No such file or directory  
406788E4Uf710000:error:80000002:system library:file_ctrl:No such file or directory:../crypto/bio/bss_file.c:297:calling fopen(hashes160.txt, r)  
406788E4Uf710000:error:10000002:BIO routines:file_ctrl:system lib:../crypto/bio/bss_file.c:300:  
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$ openssl rmd160 *.sh > hashes160.txt  
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$ openssl rmd160 -c hashes160.txt  
RIPEMD-160(hashes160.txt)= 51:d1:2d:94:bc:45:0b:9f:9a:41:75:20:f1:33:8a:c6:42:69:61:12  
uaem@DESKTOP-R3NKLPLG:~/ejercicios_shell$
```