Hard-Copy of **example**

Below is the `base64` encoded content of `example`.

```
001 LS0tL S1CRU dJTiB SU0Eg UFJJV kFURS BLRVk tLS0t LQpNS UlFcF FJQkF BS0NB UUVBc        1626193903  68
002 2VKME podzl jcjVl N1FTa k1TdW pYUyt FRkgw UHJMW jJtYU swRlh PYVhX ZkJ0Z URXCm        3158616388  68
003 QyOWF xbUgv Qm03S k5pSH NNalN SMnFs dU5Pc 3Z5Tz JBVjF jdWF3 T2Zud DNZMy 91b2x        4203632775  68
004 5RDA0 UTlBR 3BYNH FCeTA KL1No Qk9BQ jVPOE 9tMU8 1K2x5 L0FOT XFDYz VCaUh TTUh1         875566432  68
005 NFNjW HVHZD R3Ym5 QWWJ5 eTc5Q UlGbE hWUXN 0ck9X YwpxT TNCbE x3RlR BTm0x aTJhT        1523718510  68
006 2gwTH lyeWF 0WVFW N0oxY jdzSG d3dGx hdDFL Ykpke HJwdn IyLzl RY2Rs QUdwS 3lDCi        1904304501  68
007 9hVmd SV1la bXozR Dh4dW t2M0o 1cm40 MlVXU HZGbF N3a0h JZFRN MjFRS U9ITU M2L2Q        3632934574  68
008 wcjV0 ZWFLZ zl0Um FXNmc KNTZS UCtsR HNZZj REVld ZdjM1 Qi82U 1VFRj FMcno 3N2ZG        405418741  68
009 cVROT HdJRE FRQUJ Bb0lC QURMU G5KM0 dNMGN 6V2Fv YQpTU U1pay tkcVN 6QVBD UXNza        1579375931  68
010 zNRUE phRjd BL3px UmtyT mpuVl BPWGF 4eDBi dkhrc DRKaC t4Skh oeExT bXdoR lhBCm        1450920483  68
011 dZaHh QckVT dCtXS k9Rbk J1TVp 5ZzRC Rit1b WRMUW 5ZS1Z xbXhQ cGFLR WNKKy 8yV29        417988693  68
012 sSk5N WG5pM 3FCai 9hS1U KL3dC eFFMb FplT0 FBZU1 6Nlh5 QVQ0U jFjWX lQSE0 3c01l        3938135667  68
013 L0ZlU XNGUn Vldlh CK2pT cHA0W GxDZm NsTGF ZZERZ VwpXS StUam Z5Qys veThn RTVna        1277591091  68
014 W56eX J0alh 4MDlE S1FlU UdTZk lWbkF hR25J T3hwU nhOSV E1RWN zQXlr K3lXQ 3I2Cn        1308933047  68
015 RrRk1 hdjBj QzJJa URrNT g3RHZ jOXg5 bUJZU nNobG JUdDV rZTE1 QkV4Z 3p6Qm 1oY1d        3867199619  68
016 iS0x0 Rlhqc HhhN3 VNcHY KaXBB cDN3R UNnWU VBMW5 lalFJ ZmJFb jZhMm dacGU 3Mmtv        4082793221  68
017 eHVlO ExmS3 dURE5 aWTRk VmZIa VdYan czbGR 3OEZw NAp6e G03MF lvMDA yQTMz L0tCT        1882474398  68
018 EI5ZT hNUXU vWURY VFJob mg4YW tMaG5 ZbU1T ZFJ2e Tdpal FoZ3l ZZFdi ckUzN 0xVCj        267674559  68
019 RuRWt zTms0 RkF4N Tgxa1 JwL3l 1c2pJ NTFMQ lZ0bk E1Nkt JMnQr VVhnS zMvZ1 dTU1Z        2753264644  68
020 BeHVZ KzBDZ 1lFQT FGVXo KbXJ4 Z3I0Z WdrK1 NvaHV MSXBR N0RiN G91dV UrVlN IVWNm        133249345  68
021 SCtOU 3Ezal ZrNTY zcmlQ ZUVQR WRJST Q0aWN Fa0hN LwpkW nlkR3 labml qYTM5 YmRlc        2197533645  68
022 UVhRG 1kdEk vU2tN SU9xR UlMbn RHTzF FSndq WHo0W HpHUk 1tNW5 OQjNu bFNWM 1E0Ck        1329397294  68
023 JCNjZ UNjVT VFViN TNqNW 9NOGY vaWtx ZDl3U XpRaE 1aNEd DVVNn c0NnW UVBcV RxVUR        355639322  68
024 mcGxh ZzJPb 1JWSU xNVHk KNFdX TklBT FdzV1 NSM2w ycVZr UGNTS jkrNk 9MMGt pUEJp        3272901812  68
025 aUdUS zMren VVc0d LK2NO K0VQM HhXVD RjejQ wSlho cApVU 0QwTW hCZzh nTEsy OVhYS        739853111  68
026 WZHS3 RCTGl QQWg5 Q3Nyd zRwRk cwMmx EcjhZ OGdFR zdCZV FEOFV aaWph cHFwO StjCl        4109731340  68
027 FpMmx vYXZh eE1ZS GhCRl l5WXR abSsw Q2dZR UF6K2 5pRHh sNG4w aHlMM zhPbW 80RXB        3755486965  68
028 NTlJF YTVBV kVxZV JnWU8 KNzhY Q1o2Y mYzZ2 9ZL0c vQ1pL UVBBW HJtRW 1UY2J rbTdr        1882531528  68
029 UUhiU U5PWl BWaVp SNnpY cm5Ub HRrbG 9MaVQ 4Y0Zy VApLR 3lHd3 dySjJ tTXBW MWExb        4139833108  68
030 FE4UT MwVnE 4VnJo Q3l1T kVsTz RZZit 6TFdK Ymw0a Utabk huUXR ZUDJl b3Qrd nhUCk        523184861  68
031 1VZkF 6TU1D Z1lFQ XFrWn ExZnl PclB0 dHJjU 2lvMV k2OWh tOGpj ZTYzd DZOdT VNU0R        2472622298  68
032 iWDlQ b1AwQ WFzYV RPeXI KM0VH dkZSV XFIV1 puM3p OaG85 ZUMvM Wp0TW pJSWF 5QWkr        3013962495  68
033 ZTV2b 1NpTV ZjeHd DTWpI ZERUO UgrSH cySWR 4OWky YQpzd DF0M2 Z1Uk9 XVmJX eUZDZ        4260954340  68
034 GJnZD I4M0Q xbE51 TSt6R lFtQU FoZ3F LcXRm MnQyW GFISU p1OXZ NPQot LS0tL UVORC        742137239  68
035 BSU0E gUFJJ VkFUR SBLRV ktLS0 tLQo=                                                 2267431676  33
```

If you need to type it manually, enter the first number (line number), and the 5-letter-words in each line in a file named `restore.txt`. Then follow the decoding instructions starting at **step 4**.

Decoding Instructions

To restore the content of example using the QR-code images below, follow these instructions:

1. Use a QR-Code decoder software to extract the text from each image.

    (a) If the page is clean and flat (i.e. not stained or crimpled), try to scan the entire page using a scanner (using at least 300 DPI black/white settings). Save the scanned document as JPG.

    (b) Alternatively, take a picture of each QR-Code square (e.g. using a mobile phone's camera) and save it as a JPG file. When taking each picture, ensure the QR-Code square is in focus, and as flat and straight as possible.

    (c) Use zbarimg (or other QR-Code software) to decode text from the images. Using multiple images is fine (order of images doesn't matter, since the decoded text will be sorted by line numbers):

    ```
    $ zbarimg -q --raw *.jpg | \
             grep -v '^$' | \
             sort -k1n,1 > restore.txt
    ```

    (d) If the page is crimpled or stained, a desktop QR-Code images might not be able to decode the QR-Code. As a fall-back, try to use one of the many free QR-Decoder apps available for mobile phones. These apps can sometimes extract text from a messy QR-Code (as they repeatedly try to refocus and decode the image shown in their view-finder). When these app extract the text, manually add the text to a file named restore.txt.

2. The restore.txt file should contain the same information as shown in the previous page (line numbers and groups of 5 letters, without the checksums).

3. Verify the restored text (compare with the values shown below):

    ```
    $ md5sum < restore.txt
    040e4687a633917ad0cf84f7a4981328  -

    $ sha256sum < restore.txt
    d730ef203979d9133ebff658cc531e52cd0c8d1fad23fd3d8ff2b9b25dbfcd37  -
    ```

4. **if** the checksums above don't match, or if you've entered file's content manually, or if some of the QR-Code images failed to decode and some lines are missing, calculate checksum on each line, and manually correct the offending/missing lines:

    ```
    $ cat restore.txt | \
        while read n ; do
            printf "%s\t" "$n" ;
            printf "%s" "$n" | tr -d ' ' | cksum ;
        done
    ```
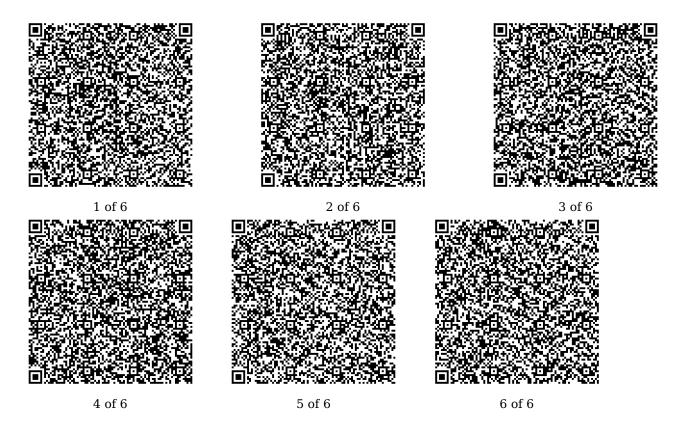
    The last two numbers in each line are the checksum and number-of-characters. They should match the values shown in the previous page.

5. Decode the file (remove the line numbers, whitespace, then decode with base64):

    ```
    $ cut -c4- restore.txt | tr -d ' ' | base64 -d > example
    ```

6. Verify the original file's content:

    ```
    $ md5sum < example
    1177ab3944182adb6133036bc7ac45f5  -

    $ sha256sum < example
    cabe7a1f9773f37db501f6e5804c1bf9737f8d047194ba6a7e6ab6e95e2944e9  -
    ```

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These are the QR-Code images of the encoded content of example. Follow the decoding instructions to restore the file's content.