```
In [1]: # Name of Creator
        CREATOR_NAME = "Jingheng Wang"
```

Similar to the previous question, we provided a "viewer" file to display our csv file as a human-reader-friendly format. This file takes the "wikiword_table_new.csv" and a kanji, displaying words in that 20K list using this kanji, and their readings/meanings.

```
In [2]: # Initialization

        import numpy as np
        import pandas as pd

        def offline_init(k = None):
            if (k is None):
                _df_ = pd.read_csv("wikiword_table_new.csv")[["word", "reading", "meanin
        g"]]
            else:
                _df_ = pd.read_csv("wikiword_table_{}.csv".format(k))[["word", "reading", "
        meaning"]]

            _sr_ = pd.read_csv("wikitionary_wordlist.csv")['word']
            return (_df_, _sr_)

        # x is a given kanji
        def offline_find_word(_sr_, x):
            #wlist = []
            wlist = {}
            wordlist_sep_char = [list(x) for x in _sr_]
            for i, li in enumerate(wordlist_sep_char):
                if (x in li):
                    #wlist.append(_sr_[i])
                    # Started from 0
                    wlist[i+1] = _sr_[i]
            return wlist

        # xl is a list of words
        def offline_word_info(_df_, xl):
            mask = np.array([False] * len(_df_["word"]))
            for i, x in enumerate(_df_['word']):
                if x in xl:
                    mask[i]=True
            return _df_[mask]
```

```
In [3]: # Modify me if you want to change the query kanji
        query_kanji = "床"

        # Sample Kanjis
        # 角 (angle / corner)
        # 食 (eat)
        # 目 (eye)
        # 床 (bed / floor)
        # 陸 (land)
```

In [4]:
```
# Get all words using that kanji. Return a dictionary, the key is the word's positi
on in 20K list, the value is the word itself.
_df_, _sr_ = offline_init()
_wl_ = offline_find_word(_sr_, query_kanji)
_wl_
```

Out[4]: {2424: '床', 5133: '臨床', 10507: '床下', 12774: '病床', 14797: '鉱床', 17101: '床面
積'}

In [5]:
```
# Display the data frame containing: all related words, their readings, and their m
eanings
offline_word_info(_df_, _wl_.values())

# If some words are not shown here, it is because they do not have a webpage on jis
ho dictionary.
```

Out[5]:

	word	reading	meaning
3189	床	とこ	1. bed; bedding$2. sickbed$3. alcove$4. riverb...
3190	床	ゆか	1. floor$2. stage (for the narrator and the sh...
3191	床	しょう	1. counter for beds$
3192	床	ゆか	1. Yuka$
6271	臨床	りんしょう	1. clinical (e.g. pathology, physiology)$
11778	床下	ゆかした	1. under the floor$
13960	病床	びょうしょう	1. sickbed; (hospital) bed$
15829	鉱床	こうしょう	1. mineral deposit; ore deposit$2. Deposition ...
17806	床面積	ゆかめんせき	1. floor space$

In [ ]: