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HW06

## **Description**

For the SHA-512 algorithm I first made all the necessary global variables within the class. This included the K constants and the 8 words used for initializing the hash buffer. For step one of the SHA-512 process involved padding the input message so it is an integral multiple of 1024 bits which is the block size. The last 128 bits of the last block must contain the message length. For step 2 I created the message schedule of 80 64-bit words. I did this by taking the first 16 words from the input block and then mixing and permuting those to create the rest of the 80 words. For step 3 I implemented the round based processing algorithm given in Lecture 15 and converted it to handle SHA-512. This used 80 rounds of processing with the round function and temporary variables. For step 4 I mixed the output of these temporary variables with the hash buffers already defined and combined the result to create the final hash.

## **input.txt**

Boku no Kokoro no Yabai Yatsu is the greatest romance, slice of life manga I've ever read. It is a series of constant progress that respects the reader's time and trusts them to read between the lines - Characters make mistakes and learn from them. Misunderstandings are never used to pad out the story, and never feel cheap. Progress is never undone. It is one of the most fully realized depictions of the liminal space between two young people as they begin to fall in love - The roller coaster between bubbly feelings and crippling cringe that is first love is so difficult to portray. I've never encountered another manga that has managed to capture this specific feeling so accurately and with so much detail.

## **hashed.txt**

84f353348a552229554fba7ba822005edcb6bca2fac8cf1735d53ae9e2915aa2e625f6d3cfa  
0106c8707ff0004d3ce95281b47b851b380ef91c86d2fb0e58b28