**Ciphers and Errors corrections**

Use a seven letter word to demonstrate how to use a Vigenere cipher to encode a word. Write a brief description of how you encrypted the word.

Produce a guide to methods used by computer systems to detect errors from data transmission.

**You should:**

* Explain how a computer system can use parity checks
* Describe and compare how ARQ and FEC are used in error correction systems.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| plaintext | a | b | c | d | e | f | g |
| key | o | n | e | o | n | e | o |
| offset | 14 | 13 | 4 | 14 | 13 | 4 | 14 |
| ciphertext | o | o | g | r | r | j | u |

Choose a key word like for example “one” and off set the plaintext by the value of the letters in the key as shown above.