

Q3a.

Through following code, We could see the results ouputted at the end of code.

```
def computeBWT(s):  
    s = s + '$'  
    rows = sorted(s[i:] + s[:i] for i in range(len(s)))  
    bwt = [row[-1:] for row in rows]  
    print("".join(bwt))  
    return "".join(bwt)  
computeBWT('I_am_fully_convinced_that_species_are_not_immutable;_but_that_those_belonging_to_what_are_c
```

Q4.

Through following code, We could see the results ouputted at the end of code.

```
def decodeBWT(r):
    rows = [""] * len(r)
    for i in range(len(r)):
        rows = sorted(r[i] + rows[i] for i in range(len(r)))
    s = [row for row in rows if row.endswith("$")][0]
    print(s.rstrip("$").strip())
    return s.rstrip("$").strip()
decodeBWT('.uspe_gexr_-----$. ,e.orr,sdddeedkdsuoden-tf,tyewtktttt,sewteb_ce__ww__h_PPsm_u_naseueeen
```