Code:

```
from cryptography.hazmat.primitives.asymmetric import rsa, padding
from cryptography.hazmat.primitives import hashes, serialization
from cryptography.hazmat.primitives.asymmetric import utils
from cryptography.hazmat.backends import default_backend

# Generate RSA private and public keys
def generate_keys():
    private_key = rsa.generate_private_key(
        public_exponent=65537,
        key_size=2048,
        backend=default_backend()
    )
    public_key = private_key.public_key()
    return private_key, public_key

# Sign a message using the private key
def sign_message(private_key, message):
    signature = private_key.sign(
        message,
        padding.PSS(
            mgf=padding.MGF1(hashes.SHA256()),
            salt_length=padding.PSS.MAX_LENGTH
        ),
        hashes.SHA256()
    )
    return signature

# Verify a signature using the public key
def verify_signature(public_key, message, signature):
    try:
```

```
        public_key.verify(
            signature,
            message,
            padding.PSS(
                mgf=padding.MGF1(hashes.SHA256()),
                salt_length=padding.PSS.MAX_LENGTH
            ),
            hashes.SHA256()
        )
        return True
    except:
        return False

if __name__ == "__main__":
    # Generate keys
    private_key, public_key = generate_keys()

    # Message to be signed
    message = b"Hello, Digital Signature!"

    # Sign the message
    signature = sign_message(private_key, message)
    print("Signature:", signature.hex())

    # Verify the signature
    is_valid = verify_signature(public_key, message, signature)
    print("Is the signature valid?", is_valid)
```

Output:

```
\ROHINI\OneDrive\Desktop\ALLIO\Python> & d:/Users/ROHINI/OneDrive/Deskto
p/ALLIO/Python/Pandas/.venv/Scripts/python.exe d:/Users/ROHINI/OneDrive/
Desktop/ALLIO/Python/P9_Signature.py
Signature: 6f4450bec4c6994ce243c35a76c93d7034b711370f467d7162fdd225e19df
a4634bdf262d1816b0bcfcb076af25d5790f7889518e98f752446f17b484b784387c37c3
d6893f55eec61819d697509c202babf830bb59771cfbaaca3335a9d54352c884715b2a69
2172425985645c265b586e4628b48cd95e3132b578cdd7f6e13f73d6fddb5468edf5ebe1
0a3679b6571f37ee9b920cefe6404efe34fb952b37538664a587c440a977e59ea1f1448e
c2043f3b0317fd134aacd19c2fd0bedb918dba3828987ea5492c313d7a1afa921b3399f9
17ab1a5dbf44299dcead8ba3090bc6f9f7d363f5aee7206280b7b8695295ad40dca010d7
36d5c1e222e9ae0c965
Is the signature valid? True
```