Que In classical world, momentum is a real quantity. In quantum world, momentum becomes imaginary, why?

Ans: In classical physics, momentum is given by $P = mv$, whereas in quantum mechanics or quantum physics, momentum is defined as a self adjoint operators on the wave function

$$\hat{P}(\psi(x)) = -i\hbar \frac{\partial \psi(x)}{\partial x}.$$

Now note that $\hat{P}$ is the momentum operator which operates on the wave function. This results in Eigen values. which is the momentum of particle and is a real number. Hence $\hat{P}$ is imaginary in quantum world, So that the Eigen value obtained can have a real value

The imaginary momentum has purely mathematical significance. imaginary momentum tells that the position space wave function has an exponential decay