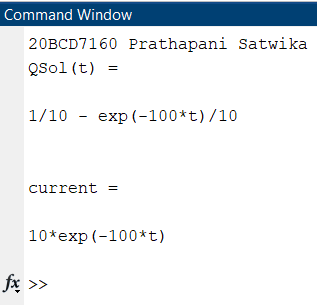
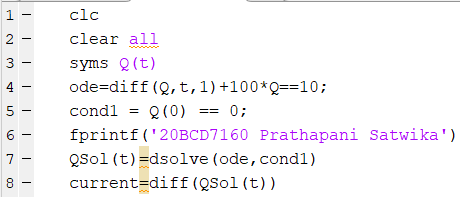
**NAME : PRATHAPANI SATWIKA**

**REG.NO. : 20BCD7160**

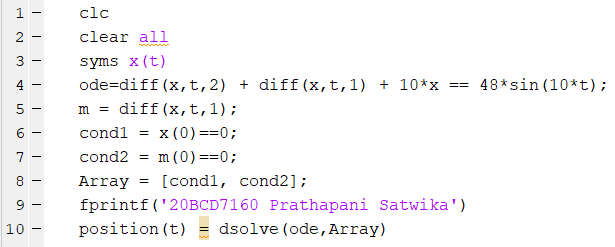
**EXPERIMENT NO. – 6 – Ordinary Differential**

**Equations**

**1.**

****

**2.**

****

**Output :**

**20BCD7160 Prathapani Satwika**

**position(t) =**

**(12\*exp(-t/2)\*cos((39^(1/2)\*t)/2))/205 - cos((39^(1/2)\*t)/2)\*((6\*cos(10\*t - (39^(1/2)\*t)/2))/205 + (6\*cos(10\*t + (39^(1/2)\*t)/2))/205 + (54\*sin(10\*t - (39^(1/2)\*t)/2))/205 + (54\*sin(10\*t + (39^(1/2)\*t)/2))/205 + (22\*39^(1/2)\*cos(10\*t - (39^(1/2)\*t)/2))/2665 - (22\*39^(1/2)\*cos(10\*t + (39^(1/2)\*t)/2))/2665 + (362\*39^(1/2)\*sin(10\*t - (39^(1/2)\*t)/2))/2665 - (362\*39^(1/2)\*sin(10\*t + (39^(1/2)\*t)/2))/2665) - (16\*39^(1/2)\*sin((39^(1/2)\*t)/2)\*((sin(t\*(39^(1/2)/2 - 10))/2 - cos(t\*(39^(1/2)/2 - 10))\*(39^(1/2)/2 - 10))/((39^(1/2)/2 - 10)^2 + 1/4) - (sin(t\*(39^(1/2)/2 + 10))/2 - cos(t\*(39^(1/2)/2 + 10))\*(39^(1/2)/2 + 10))/((39^(1/2)/2 + 10)^2 + 1/4)))/13 - (1448\*39^(1/2)\*exp(-t/2)\*sin((39^(1/2)\*t)/2))/(65\*(39^(1/2) - 11)\*(39^(1/2) + 11))**

**>>**