

! Program to write the points (satisfying the parabola equation) in a dat file

```
program outputdata
```

```
    implicit none
```

```
    real,dimension(100)::x,y
```

```
    real,dimension(100)::p,q
```

```
    integer :: i
```

```
    real::a
```

```
    print*,"Enter the value of a(distance from origin to focus) : "
```

```
    read*,a
```

```
    !Taking value of x and y
```

```
    do i=1,100
```

```
        x(i)=i*0.1      !Taking 100 values of x as multiple of 0.1
```

```
        y(i)=sqrt(4*a*x(i))
```

```
    end do
```

```
    !Writing in the File
```

```
    open(1,file="parabola.dat",status="old")
```

```
    do i=1,100
```

```
        write(1,*),x(i),y(i)
```

```
    end do
```

```
    close(1)
```

```
end program
```

GnuPlot commands for plotting data from above created file

```
set terminal png  
set output "Parabola.png"  
set xlabel "x-axis"  
set ylabel "y-axis"  
set title "Parabola"  
plot "parabola.dat" w lp
```

"Parabola.png" file is shown below

(Attached File : Parabola.png)

