The fortran codes developed and included in the reports should be written in a compact, single spaced format and using a maximum font size of 11pt. For presenting the modified versions of the code, only the modified parts of the code should be included.

```
c--------------------------------------------------------------------
c..AN EULER SOLVER for 1st order ODEs - AE305 Numerical Methods
c--------------------------------------------------------------------
      program EULER
      character*40 fname
c..Read the solution parameters
      print*, ' '
      print*, '  Enter StepSize and FinalTime :> '
      read(*,*) stepsize, finaltime
c..Open the output file
      print*,'  Enter the output file name [velocity.dat]:'
      read(*,'(a)') fname
      if( fname .eq. ' ') fname = 'velocity.dat'
      open(1,file=fname,form='formatted')
c..Set the Initial Conditions and print them out
      time      = 0.
      velocity  = 0.
      write(1,'(2f12.5)') time, velocity
c..Solution loop
      do while ( time .lt. finaltime )
         velocity = velocity + stepsize*ODE(time,velocity)
         time     = time + stepsize
         write(1,'(2f12.5)') time, velocity
      enddo
c..Close the output file
      close(1)
      stop
      end
c--------------------------------------------------------------------
c..Define the ODE as a Fortran function
      function ODE(time,velocity)
      data grav/9.81/, fric/12.5/, xmass/70./
      ODE  = grav - fric/xmass * velocity
      return
      end
```

The implementation of the mid-point method is achieved by modifiying the solution loop as the following:

```
c..Solution loop
      do while ( time .lt. finaltime )
         k1 = ODE(time,velocity)
         velocity = velocity + stepsize*ODE(time,velocity)
         ...
         time     = time + stepsize
         write(1,'(2f12.5)') time, velocity
      enddo
```