```
f = @(t, y) ((t+2*t^3)*y^3 - t*y);
a = 0;
b = 2;
hmax = .5;
hmin = .02;
tol = 10^(-6);
yo = 1/3;
realF = @(t) (3 + 2*t^2 + 6*exp(1)^(t^2))^(-.5);
[t_, w_ ,y_] = PredictorCorrectorAdaptive(a, b, yo, f, realF, tol,
 hmin, hmax);

j = 2;
while (t_(j) ~= 0)
   j = j +1;
end

fprintf("Implementing adams method with variable step size for nubmer
 3 on test\n");
for i = 1: j-1
   fprintf("i = %d t = %.10f w = %.10f error = %.10f\n", i, t_(i),
 w_(i), y_(i));

end
```

```
Implementing adams method with variable step size for nubmer 3 on test
i = 1 t = 0.0000000000 w = 0.3333333333 error = 0.3333333333
i = 2 t = 0.0570973032 w = 0.3328508139 error = 0.0000000000
i = 3 t = 0.1141946065 w = 0.3314087301 error = 0.0000000000
i = 4 t = 0.1712919097 w = 0.3290232910 error = 0.0000000001
i = 5 t = 0.2283892130 w = 0.3257207854 error = 0.0000000290
i = 6 t = 0.2854865162 w = 0.3215366779 error = 0.0000000650
i = 7 t = 0.3425838195 w = 0.3165142797 error = 0.0000001052
i = 8 t = 0.3996811227 w = 0.3107033314 error = 0.0000001466
i = 9 t = 0.4567784259 w = 0.3041584945 error = 0.0000001863
i = 10 t = 0.5138757292 w = 0.2969378735 error = 0.0000002216
i = 11 t = 0.5709730324 w = 0.2891016551 error = 0.0000002506
i = 12 t = 0.6280703357 w = 0.2807109336 error = 0.0000002722
i = 13 t = 0.6851676389 w = 0.2718267651 error = 0.0000002857
i = 14 t = 0.7422649422 w = 0.2625094713 error = 0.0000002914
i = 15 t = 0.7993622454 w = 0.2528181922 error = 0.0000002899
i = 16 t = 0.8564595486 w = 0.2428106644 error = 0.0000002825
i = 17 t = 0.9553710884 w = 0.2248909003 error = 0.0000002825
i = 18 t = 1.0542826281 w = 0.2064742302 error = 0.0000002618
i = 19 t = 1.1531941678 w = 0.1878359454 error = 0.0000002387
i = 20 t = 1.2521057075 w = 0.1692456332 error = 0.0000001805
i = 21 t = 1.3510172472 w = 0.1509674279 error = 0.0000002946
i = 22 t = 1.4133784266 w = 0.1397198049 error = 0.0000002946
i = 23 t = 1.4757396060 w = 0.1287592841 error = 0.0000002749
i = 24 t = 1.5381007855 w = 0.1181434066 error = 0.0000002544
i = 25 t = 1.6004619649 w = 0.1079249816 error = 0.0000002583
i = 26 t = 1.6628231443 w = 0.0981510916 error = 0.0000002767
i = 27 t = 1.7251843237 w = 0.0888619042 error = 0.0000002856
```

```
i = 28 t = 1.7875455031 w = 0.0800898800 error = 0.0000002824
i = 29 t = 1.8499066825 w = 0.0718592071 error = 0.0000002661
i = 30 t = 1.9122678619 w = 0.0641855544 error = 0.0000002369
i = 31 t = 1.9342008964 w = 0.0616206545 error = 0.0000002369
i = 32 t = 1.9561339309 w = 0.0591256973 error = 0.0000002280
i = 33 t = 1.9780669655 w = 0.0567006352 error = 0.0000002193
i = 34 t = 2.0000000000 w = 0.0543453042 error = 0.0000002024
```

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