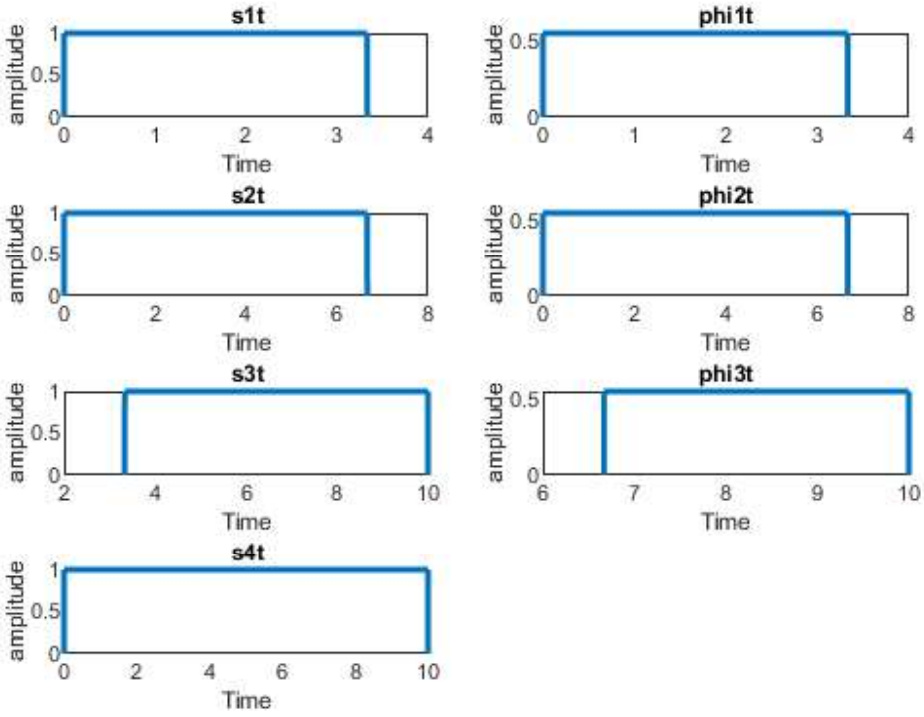
Experiment No. 5

```
% Name: Prajwal Dhopre
% Roll No.: 53
% Batch: A3

% Aim: To Study Gram Schmidt orthogonalization method

% Objective: Gram schmidt orthogonalization procedure for given set of
% signal

T=10;
t1=0:0.001:T/3;
s1t=[0,ones(1,length(t1)-2), 0];
subplot(4,2,1);
plot(t1,s1t,'LineWidth',2);
xlabel("Time");
ylabel("amplitude");
title("s1t");


t2=0:0.001:2*T/3;
s2t=[0,ones(1,length(t2)-2), 0];
subplot(4,2,3);
plot(t2,s2t,'LineWidth',2);
xlabel("Time");
ylabel("amplitude");
title("s2t");


t3=T/3:0.001:T;
s3t=[0,ones(1,length(t3)-2), 0];
subplot(4,2,5);
plot(t3,s3t,'LineWidth',2);
xlabel("Time");
ylabel("amplitude");
title("s3t");


t4=0:0.001:T;
s4t=[0,ones(1,length(t4)-2), 0];
subplot(4,2,7);
plot(t4,s4t,'LineWidth',2);
xlabel("Time");
ylabel("amplitude");
title("s4t");


t5=0:0.001:T/3;
phi1t=sqrt(3/T)*[0,ones(1,length(t5)-2), 0];
subplot(4,2,2);
plot(t5,phi1t,'LineWidth',2);
```

```
xlabel("Time");
ylabel("amplitude");
title("phi1t");


t6=0:0.001:2*T/3;
phi2t=sqrt(3/T)*[0,ones(1,length(t6)-2), 0];
subplot(4,2,4);
plot(t6,phi2t,'LineWidth',2);
xlabel("Time");
ylabel("amplitude");
title("phi2t");


t7=2*T/3:0.001:T;
phi3t=sqrt(3/T)*[0,ones(1,length(t7)-2), 0];
subplot(4,2,6);
plot(t7,phi3t,'LineWidth',2);
xlabel("Time");
ylabel("amplitude");
title("phi3t");
```



Published with MATLAB® R2022a