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3) Proportional Scheduling :

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

int main()
{
    Srand (time(NULL));
    int n;
    printf(" Enter number of processes : ");
    Scanf ("%d", &n);
    int p[n], t[n], cum[n], m[n];
    int c=0;
    int total=0, count=0;
    Printf ("Enter tickets of the processes : \n");
    for(int i=0; i<n; i++)
    {
        Scanf (" %d", &t[i]);
        c += t[i];
        cum[i] = c;
        p[i] = i+1;
        m[i] = 0;
        total += t[i];
    }
    while (count<n)
    {
        int wt = rand() % total;
        for(int i=0; i<n; i++)
        {
            if (wt < cum[i] && m[i] == 0)
            {
                printf ("The winning number is
```

```
%d and winning participant is: %d \n", wd,
p[i]);
m[i] = 1;
count++;
}
}
}
printf("\n probabilities: \n");
for(int i=0; i<n; i++)
{
printf("The probability of p%d winning is %.2f
%\n", p[i], ((double)t[i]/total * 100));
}
}
```

Output:

Enter the number of process: 3
Enter the tickets of the processes:
10 20 30
The winning number is 7 and winning participant is: 3
The winning number is 22 and winning participant is: 2
The winning number is 4 and winning participant is: 1
probabilities:
The probability of P1 winning: 16.67
The probability of P2 winning: 33.33
The probability of P3 winning: 50.00