AIM :- To execute a check sum.

program :-

```
#include <stdio.h>
#include <string.h>
void main()
{
  char a[20], b[20];
  char sum[20], comp[20],
  int i, len;
  printf("Enter the binary string\n");
  scanf("%s", &a);
  printf("Enter secondary binary string\n");
  scanf("%s", &b);
  if(strlen(a) == strlen(b))
  {
     len = strlen(a);
     char carry = '0';
     for(i=len-1; i>=0; i--)
     {
       if(a[i]=='0' && b[i]=='0' && carry=='0')
       {
          sum[i] = '0';
          carry = '0';
       }
       else if(a[i]=='0' && b[i]=='0' && carry=='1')
       {
          sum[i] = '1';
          carry = '0';
       }
       else if(a[i]=='0' && b[i]=='1' && carry=='0')
       {
         sum[i] = '1';
         carry = '0';
       }
       else if(a[i]=='0' && b[i]=='1' && carry=='1')
       {
          sum[i] = '0';
          carry = '1';
       }
```

```
        else if(a[i]=='1' && b[i]=='0' && carry=='0')
        {
          sum[i]='1';
          carry='0';
        }
        else if(a[i]=='1' && b[i]=='0' && carry=='1')
        {
          sum[i]='0';
          carry='1';
        }
        else if(a[i]=='1' && b[i]=='1' && carry=='0')
        {
          sum[i]='0';
          carry='1';
        }
        else if(a[i]=='1' && b[i]=='1' && carry=='1')
        {
          sum[i]='1';
          carry='1';
        }
        else
          break;
    }
    printf("\n sum = %s", sum);
    for(i=0; i<len; i++)
    {
      if(sum[i]=='0')
          comp[i]='1';
      else
          comp[i]='0';
    }
    if (carry=='1')
          carry='0';
    else
      carry='1';
    printf("\n checksum = %c %s", carry, comp);
}
```

```
else
{ printf("In Wrong input strings");
}
}
```

Output:

```
Enter the binary string
11110000
Enter second binary string
00001111
sum = 01111111
Checksum = 10000000.
```

Result 18/10