

WAP for error detecting code using
CRC-CCITT (16-bits)

```
def main():
```

```
    n = 0
```

```
    i = 0
```

```
    print("Enter the Polynomial : ")
```

```
    read poly
```

```
    n = len(poly)
```

```
    // Message Polynomial have to be appended
```

```
    // with 16 zeros.
```

```
    copy = poly
```

```
    for i in range(16):
```

```
        poly = poly + "0"
```

```
    n = len(poly)
```

```
    global generating_poly = "10001000000100001"
```

```
    print("Polynomial after appending  
16 zeros")
```

```
    print(poly)
```

```
    print("generating Polynomial = ")
```

```
    print(generating_poly)
```

```
    code = divide(poly)
```

```
copy = copy[0:n] + code[n:]  
print ("CRC = " + code[n])  
print ("transmitted frame is " +  
      copy);
```

```
print ("Enter Received data")  
read rec
```

```
res = divide(rec)
```

```
if res == 0:
```

```
    print ("correct bit received")
```

```
else
```

```
    print ("error with").
```

divide (e) :

div - generating - poly

for i in range(n):

u = s[i]

for j in range(1, n):

if u == '1':

if s[i+j] != s[j]:

s = s[0:i+j] + '1' +
s[i+j+1:]

else

s = s[0:i+j] + '0' +
s[i+j+1:]

return s.