Software Engineering LAB

Assignment-2

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1. To find the UFP , we need to assume all weight factors to be avg.
   UFP = #inputs * 4 + #outputs * 5 + #inquiries * 4 + #files * 10 + #interfaces * 7
   = 32*4 + 60*5 + 24*4 + 8*10 + 2*7
   = 128+300+96+80+14
   = 618 (Ans.)

   As degree of influence is average, in each of the 14 descriptions, so, TDI = 14*3 = 42
   CAF = 0.65+0.01*TDI
   = 0.65+0.01*42
   = 1.07 (Ans.)

   FP = UFP*CAF
   = 618*1.07
   = 661.26 (Ans.)

2. UFP = #inputs*3 + #outputs*4 + #inquiries*6 + #files*10 + #interfaces*5

   =24 * 4 + 46 * 4 + 8 * 6 + 4 * 10 + 2 *

   = 96+184+48+40+10 = 378 (Ans.)

   CAF = 0.65+(0.01*TDI)

   = 0.65+(0.01*(4+1+0+3+3+5+4+4+3+3+2+2+4+5) (TDI 's as given in question)

   = 0.65+0.01*43 = 1.08 (Ans.)

FP = UFP*CAF

= 378*1.08 = 408.24 (Ans.)

3.

```
#include <bits/stdc++.h>

using namespace std;

map<int,int> ufp[5];

int main()
{

   ufp[0][0] = 3;
   ufp[0][1] = 4;
   ufp[0][2] = 6;

   ufp[1][0] = 4;
   ufp[1][1] = 5;
   ufp[1][2] = 7;

   ufp[2][0] = 3;
   ufp[2][1] = 4;
   ufp[2][2] = 6;

   ufp[3][0] = 7;
```

```
ufp[3][1] = 10;
ufp[3][2] = 15;

ufp[4][0] = 5;
ufp[4][1] = 7;
ufp[4][2] = 10;

int complexity=0,answer=0;
int input,output,enquiry,fileType,interfaceType;
cout<<"Enter the external input type"<<endl;
cin>>input;
cout<<"Enter the complexity: Low->0|Med->1|High->2 "<<endl;
cin>>complexity;
answer+=ufp[0][complexity]*input;
cout<<"Enter the external output type"<<endl;
cin>>output;
cout<<"Enter the complexity: Low->0|Med->1|High->2 "<<endl;
cin>>complexity;
answer+=ufp[1][complexity]*output;
cout<<"Enter the external enquiry type"<<endl;
cin>>enquiry;
cout<<"Enter the complexity: Low->0|Med->1|High->2 "<<endl;
cin>>complexity;
answer+=ufp[2][complexity]*enquiry;
cout<<"Enter the external fileType type"<<endl;
cin>>fileType;
cout<<"Enter the complexity: Low->0|Med->1|High->2 "<<endl;
cin>>complexity;
```

```
    answer+=ufp[3][complexity]*fileType;
    cout<<"Enter the external interfaceType"<<endl;
    cin>>interfaceType;
    cout<<"Enter the complexity: Low->0|Med->1|High->2 "<<endl;
    cin>>complexity;
    answer+=ufp[4][complexity]*interfaceType;


   cout<<"The UFP is: "<<answer<<endl;

   return 0;
}
```

Sample Output: