C++ Dynamic Object Creation

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```
//metal.dll
class MetalForm: public AbstractForm{};
...
class MetalFactory: public AbstractFactory{};

UIFactory * CreateFactory(){ new MetalFactory();}
```

```
//glass.dll
class GlassForm: public AbstractForm{};
...
class GlassFactory: public AbstractFactory{};

UIFactory * CreateFactory(){ new GlassFactory();}
```
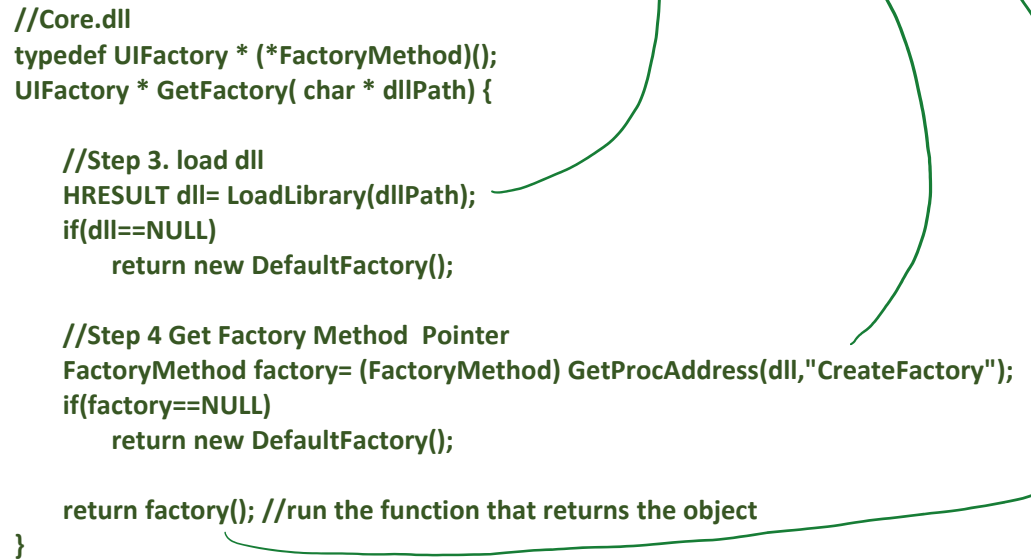
```
//Core.dll
typedef UIFactory * (*FactoryMethod)();
UIFactory * GetFactory( char * dllPath) {

    //Step 3. load dll
    HRESULT dll= LoadLibrary(dllPath);
    if(dll==NULL)
        return new DefaultFactory();

    //Step 4 Get Factory Method  Pointer
    FactoryMethod factory= (FactoryMethod) GetProcAddress(dll,"CreateFactory");
    if(factory==NULL)
        return new DefaultFactory();

    return factory(); //run the function that returns the object
}
```

```
void main(int argc, char ** argv){

    UIFactory * ui = GetFactory(argv[1]);

    UIForm * form= ui->CreateForm();


}
```