Landslides ~~which define as the~~ is ~~movement~~ moving of a ~~mass of~~ debris, rock, or ~~and~~ soil mass down the slope~~, are~~ and is one of the most common natural disasters in mountainous areas that puts ~~people's life~~ lives and ~~property~~ properties of the people at risk (Chakraborty and Pradhan, 2012~~, ;~~ Regmi et al., 2014). ~~Compared to other natural disasters, landslides~~ Landslides occur in smaller scales than other natural disasters do, but have higher distribution and are more dangerous in many cases (Trigila et al., 2015). Landslides ~~cause~~ lead to evolution of landforms and are considered as the biggest threat in many ~~parts~~ regions of the world (Pourghasemi et al., 2013). ~~Center for research on the epidemiology of disaster~~ Based on the reports of the Centre for Research on the Epidemiology of Disasters (CRED), ~~reported~~ landslides are the cause of~~to~~ 17% of all ~~fatalities from~~ casualties of natural hazards ~~worldwide~~ in the world (Pourghasemi et al., 2012a) ~~and some~~. Some researchers (Goetz et al., 2011; Kanungo et al., 2009) ~~explain that~~expect this trend ~~in expected for~~to increase in the future ~~due to~~with increase in urbanization, deforestation, and ~~changing~~ change in climate condition. ~~It~~ The damage caused by landslides is ~~expected that the damage caused by landslides will raise~~ also predicted to rise in the ~~coming~~ subsequent decades ~~due to~~with population growth, progression of residential areas ~~progression~~ and infrastructure in ~~high risk~~high-risk areas, continuing deforestation, and ~~increasing~~ increase in regional precipitation (Regmi et al., 2014).

One of the main approaches to ~~reduce~~ reducing these damages ~~are~~ is preparation of Landslide Susceptibility ~~Mapping~~ Map (LSM). LSM ~~plays~~ has a ~~vital and important~~ major role in risk mitigation of landslides. ~~-~~Van Western et al. (2006) stated that ~~future~~ landslides ~~are~~ would more likely occur in the ~~area that past~~areas with the background of occurrences of landslides ~~occurrences~~.

In the past two ~~past~~ decades, ~~a lot of~~considerable research~~es related to~~ on landslide susceptibility ~~have~~ has been ~~done all over the world~~carried out worldwide. Many ~~researchers~~ scholars have tried different approaches ~~for~~ to preparing ~~landslide susceptibility maps~~LSMs. ~~Landslide susceptibility maps~~In addition to crisis planning, LSMs are ~~essential to identify areas at~~crucial for identifying the areas prone to the risk of landslides as well as managing and reducing the risk ~~, crisis planning and managing as well as to reduce the risk of landslides~~ (Holec et al., 2013).

These maps can be provided using an appropriate model by ~~and~~ having the landslide data and a set of independent variables (Budimir et al., 2014). There are three main groups of landslide susceptibility methods, including innovative, deterministic, and statistical (Guzzeti~~,~~ et al., 1999). ~~Innovative models are based on expert opinion for determination of the weights for~~ The basis of the innovative models is the opinion of the experts in identifying the weight of each factor ~~thus these kind~~. Thus, this type of models ~~have~~ has a high potential for error (Dahal et al., 2008; Hojrat and Louto~~.~~, 2013). Deterministic models are developed ~~according to~~on the basis of mathematical relationships. These models are based on ~~given~~ the physical laws ~~and it~~

~~required~~, which require calculating the relationship between the resistance forces and drivers of the mass movements~~drivers~~ (Tsangaratos et al., 2013).

~~In the recent year, due to development of~~Recently, with the advances in the commercial ~~system~~world, remote sensing, and quick access to ~~data usage of GIS to~~GIS data in natural hazard mapping, ~~especially~~ landslide modeling has been ~~increased~~ improved (Althuwaynee et al., 2012). Many ~~research in~~studies on LSM have been ~~don~~ conducted using ~~Frequency~~ frequency ratio (Pham, 2015; Youssef et al., 2014), ~~Weights-of-Evidence~~ Weight of Evidence (WoE) (Youssef et al., 2015), Evidential Belief ~~function~~ Function (EBF) (Althuwaynee et al., 2012), Artificial Neural Networks (ANNs) (Hong et al., 2015; Pradhan et al~~,~~ ., 2010a,b; ~~-~~Pradhan and Buchroithner, 2010; Yilmaz, 2010a~~, 2010b~~,b; Lee et al., 2003~~, ~~; Lee et al., 2004)~~-~~, ~~Neuro-Fuzzy~~ neuro-fuzzy systems (Oh and Pradhan, 2011; ~~-~~Sezer et al., 2011; Tien Bui et al., 2011), ~~Fuzzy Logic~~fuzzy logic (Akgun~~-et~~ et al., ~~-~~2011; Pradhan, ~~-~~2010a,b~~,~~; Pradhan 2011a,b; ~~-~~Pourghasemi et al., 2012b), Analytical Hierarchy Processes (AHPs) (Althuwaynee et al., 2014), Shannon ~~Entropy~~ entropy (Pourghasemi et al., 2012a), Logistic ~~regression~~ Regression (LR) (Pourghasemi et al., 2013), and ~~Statistical Index~~statistical index (Pourghasemi et al., 2013; Regmi et al., 2013) in Geographic Information System (GIS). ~~This some technique has~~Some of these techniques have been used in other fields of study, such as identification of flood~~-~~-prone areas (Khosravi et al., 2016 a,~~-~~b)~~-as well~~.

Zhang et al. (2016) studied landslides in China by combining ~~methods of Statistical~~ statistical index and AHP methods to prepare ~~landslide susceptibility maps~~LSMs. They stated that residential areas and sporadic forests with geological units of red layered moderate soft mixture of clastic rocks placed in altitude class of 0 -200 m were quite prone to landslide. In Iran, ~~The most frequent~~ landslides have been most frequently reported in Mazandaran province, Iran (Pourghasemi and Kerle, 2017). Klijanrestagh ~~watershed is~~ Watershed, located in Mazandaran, ~~which~~ is one of ~~landslide prone~~the areas with high risk of landslide due to ~~the~~ special physiographic and climatic conditions, geological formations ~~that~~ susceptible to the occurrence of landslides ~~event~~, and ~~a lot of~~the existence of many villages in highlands.

~~Due to the frequent occurrence of landslides~~ As landslides frequently occur in the ~~study area, the main goal of~~ area under study, this research ~~was to investigate the prone areas of future~~ study was basically aimed at investigating the areas at risk of the occurrence of landslides in the future in order to manage and reduce ~~their~~ losses ~~as well as to~~; identifying the ~~most important~~major factors of the occurrence of landslides in the ~~study~~ area under study using FR, SE, ~~WOE~~WoE, and EBF; and finally ~~to evaluate~~, evaluating the performance of these models in the identification of landslide-prone areas.